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MR. H. G. TORREY, of Messrs. TORREY & EATON, of this city, will leave for Colorado on the 15th inst., to visit the Denver Exhibition and examine some mining properties in Colorado. His Denver address will be care of E. E. BURLINGAME.

BUTTE, Montana, is also going to have its great contest of town-site *versus* mineral rights. Thus far, the owners of the Pawnbroker, Carlotta, Maximilian, and Smokehouse lodes have begun action for the purpose of recovering possession of surface ground, and a bitter fight is looked forward to.

GENERAL GRANT and Mr. W. H. TRESCOT have been appointed commissioners to negotiate a commercial treaty with Mexico. Should they be successful, the bonds of mutual interest which unite the two republics, and which are growing in volume steadily, would be much strengthened. The mining interests, and the machinery and other allied industries, will be great gainers should a treaty favorable to them be framed and adopted.

SOME European journals are expressing the belief that possibly the ROTHSCHILDS will make an effort to arrange with California producers of quicksilver to reduce the output and thus aid an improvement in prices. The last contract between Spain and the ROTHSCHILDS was based on a minimum market price of £6 per bottle in London. Between £6 and £8, the excess over £6 is divided between the contracting parties. When the price goes beyond £8, the ROTHSCHILDS get one third of the excess, and Spain two thirds.

MR. JOSEPH NIMMO, Jr., Chief of the Bureau of Statistics, has just issued a preliminary report on the foreign commerce of the United States during the fiscal year ended June 30th, 1882. According to the figures gathered by him, the total value of the foreign commerce of the country during the year, embracing both imports and exports of merchandise and specie, amounted to $1,566,859,456, as against $1,675,024,318 during the preceding fiscal year, showing a falling off of $108,164,182. The most serious item is the falling off of exports, of merchandise from $902,377,346 in 1881, to $750,351,173 in 1882, while the imports increased from $642,664,628 to $724,623,317. Therefore, the so-called "balance of trade," about which so many peculiar notions have gained currency, dropped from $259,712,718 to $25,727,856. The specie movement is summed up as follows : Exports rose from $19,406,847 to $49,412,576, while imports declined from $110,575,497 to $42,472,390, thus converting an excess of imports over exports of $91,168,650 in 1881, to an excess of exports over imports of $6,940,186 in 1882.

PRESUMABLY, as one of the attractions of the Exhibition at Denver, the Board of Trade of that "metropolis" has resolved to issue invitations to attend a National Industrial Convention. This convention is to be held on the 12th and 13th of September, and it is intended that it shall be formed of representatives of the "manufacturing, commercial, mining, and agricultural interests of the whole country." The work of the delegates will be to discuss the following topics :

First. The Monetary Question : Is it for the best interest of the citizens of the United States to have silver demonetized ?

Second. The Immigration Question : Is increased immigration desirable ? Should Chinese immigration be restricted ?

Third. The Labor Question : Are strikes and trades-unions a curse or a blessing to the laboring classes ?

Fourth ? The Tariff Question : Is protection necessary to the growth of American industries ?

These are momentous questions indeed, and the country at large will be in suspense until its representatives, in convention assembled at Denver, will pronounce their verdict.

THE Chicago Convention of the Amalgamated Association of Iron and Steel Workers has adjourned. Naturally, its officers have not allowed to go forth any intimations concerning the result of councils held, beyond those which reflect favorably upon the strength of its position in the pending struggle with the mills. Little value can be attached to statements of unanimous votes indorsing the strike, etc. A more important matter is the passage of a resolution guaranteeing the manufacturers that the basis of the present sliding-scale on puddling and nailing would not be changed for four years, a statement which will be received with satisfaction. A reorganization was also effected by which greater unity of action is assured. Secretary MARTIN is reported to have explained this matter as follows :

"Hertofore, each district has met annually in its district convention and had its own base for the scale, without the sanction or interference of other districts. In future, they will meet as they have done and suggest such alterations as they may deem necessary. Then they will proceed to elect delegates on the basis of one delegate for every 300 members of the association in the district. The delegates thus elected will meet at Pittsburg in April, and discuss the suggestions offered by district conventions. In this body the majority rules, and when they have agreed upon what they think is right, a conference committee will be appointed to meet a like committee from the manufacturers and discuss the scale."

We trust that this will prevent the recurrence of the flagrant breaches of good faith of which some of the district associations have been guilty in the past.

ONE of the interests which has been a particular object for the attacks of tariff reformers and free traders has been copper mining. It is cried down as a monster monopoly, growing and prospering under a tariff that is practically prohibitive. The matter has been much talked about, and in reality only one side has been heard. It must be clearly understood that in reality none but outside parties has urged a modification of the law as it now stands. The duty on copper is five cents a pound. We have in past years occasionally made more copper than we could consume, and producers were forced to market their surplus abroad at prices ruling in the French and English markets. When it has been possible, the copper to be sent abroad has been sold to American makers of cartridges at so low a price that they were in a position to underbid foreign competitors. The latter now quite generally have adopted American machinery and methods, and there is little prospect of much more business of that kind. They do, however, still buy Lake copper, which even Wallaroo or other best brands do not approach in purity and mechanical qualities. These facts have been dwelt upon with considerable display of indignation by tariff reformers ; but what very few of them touch upon is the fact that manufacturers of copper are even much more strongly guarded against the invasion of foreign competitors. The copper rolling-mills of the country, ten in all, we believe, form one of the most strongly bound trade associations known in this country, and their list prices are adhered to in fear of a heavy penalty. We have even heard of compacts which are very similar to the alleged arrangement for closing the Vulcan Steel-Works years ago by the rest of the Bessemer steel mills. These manufacturers are protected by a 45 per cent *ad valorem* duty. They pay say 18 cents for copper and are

now getting 28 cents per pound for the plainest goods they sell. Assuming that the cost of rolling, waste in melting, reheating, and shearing, cutting to dimensions, packing, and freight to market is $40 per ton, which is probably a very liberal estimate, it will be seen that the cost is probably not much more than 20 cents a pound. With such profits, it is not astonishing that the home demand for copper in its various forms is not as great as it might be, and that no ambition is shown to capture foreign markets. With brass, of course, the matter is different, because there free competition has placed consumers in a position to obtain ever-growing quantities of supplies at reasonable figures.

The demands now urged by saddlery hardware manufacturers and others for a reduction of the duty on the raw material, while insisting that no changes be made in the manufactured product, are unfair. If a reduction of the duty on copper must be made, it is only fair to the producers of the metal that the home consumption of the finished article be fostered by a corresponding reduction in prices through a scaling down of the duty on the latter.

ACCIDENTS IN MINES.

Though mining is always considered a hazardous work, the general public, and only too often also those engaged in it, have very erroneous ideas concerning the causes of the greatest mortality, and the many circumstances which affect the safety of miners. Accurate statistics, of course, furnish the best guide for an inquiry on the nature of accidents in mines, and furnish some indications as to the character of the measures to be taken to avoid their frequent occurrence. Still, they often furnish only a general result, without allowing precise assignment of the effect of many contributing causes. It is natural to suppose that accidents of one class will be more numerous and more fatal in periods of stagnation of the business; while others will rapidly increase when the state of the markets urges proprietors and managers to strain the capacity of their plant and their force to reap the benefits of round profits. High prices for timber may cause undue economy in protecting miners against falls, or lead to recklessness in robbing the supports in abandoned workings. When a mine is busy, little defects in hoisting arrangements or track will be ignored, and repairs will be left for the dull season. These are causes which often affect the mortality of large districts, and which statistics fail to reveal. Still, with such reservations, accident statistics furnish valuable hints, and certainly are instrumental in dispelling wrong impressions. They are valuable to mine proprietors and managers, both as placing the risks of their business in their true light before the public and as furnishing them a guide as to what dangers they must avoid. Unfortunately, such statistics are collected with care in a few countries only, the returns made by the Prussian government officials being the most elaborate, closely followed by those gathered by the English mine inspectors. In our own country, we possess no data relating to our metalliferous mines, the only figures approaching a high standard of value being those reported annually by the coal-mine inspectors of Pennsylvania.

As being the most complete, we may present the statistics of accidents in Prussian mines first. They are particularly valuable as showing how different is the proportion of fatal accidents in coal, lignite, and metalliferous mines. We have omitted the list of miscellaneous mines, including salt, slate, limestone, etc.

FATAL ACCIDENTS IN PRUSSIAN MINES.

Year.	Coal.			Lignite.		
	Total number of men.	Total accidental deaths.	Accidents per 1000 men.	Total number of men.	Total accidental deaths.	Deaths per 1000 men.
1880	156,125	503	3·222	19,767	42	2·125
1879	149,552	444	2·968	18,627	40	2·147
1878	140,319	401	2·741	18,302	38	2·076
1877	147,024	406	2·761	18,827	33	1·753
1876	159,660	451	2·824	19,322	48	2·484
1875	160,462	454	2·829	18,448	43	2·331
1874	161,993	484	2·988	18,597	38	2·043
1873	159,562	450	2·820	18,068	50	2·767
1872	139,858	383	2·739	17,447	54	3·038
1871	131,337	403	3·075	16,863	65	3·855
1870	107,703	339	3·148	14,780	41	2·774

Year.	Metalliferous.			All Mines.		
	Total number of miners.	Total accidental deaths.	Deaths per 1000 men.	Total number of miners.	Total accidental deaths.	Deaths per 1000 men.
1880	67,174	97	1·444	250,294	650	2·597
1879	69,106	82	1·363	235,617	575	2·440
1878	59,848	92	1·537	232,004	542	2·336
1877	59,758	76	1·339	231,117	534	2·310
1876	53,657	61	1·696	240,865	600	2·491
1875	52,773	79	1·499	239,722	587	2·449
1874	53,468	60	1.082	243,155	591	2·431
1873	62,206	68	1·574	247,594	620	2·504
1872	63,493	110	1·732	227,520	564	2·479
1871	58,766	81	1·378	213,156	562	2·632
1870	55,044	79	1·435	133,532	469	2·555

These tables clearly illustrate the greater danger to life of working in coal mines, the average mortality per 1000 men employed, for the period of 1867 to 1880, having been 2·939, against 2·475 in lignite mines, and 1·439 in metalliferous mines. It is the custom to compute also the number of tons of mineral raised per accidental death; the average having been for a period of ten years in Prussia, 77,156 tons for coal, 197,810 tons for lignite, and 44,219 tons for ore. These figures, however, have no value for purposes of comparison, because the quantity raised per miner varies within very wide limits, according to the nature of the deposits, their location, etc. From the detailed statement of the causes of accident given by the Prussian officials, we compile the following table. The figures for the year 1880 show how the various classes of miners were affected. Where the number of accidents is small, of course one single catastrophe may alter the figures very materially. The averages for ten years of all the disasters are added, and they furnish a much better basis for deductions of a general nature. The figures are accidents per 1000 men employed.

NATURE OF ACCIDENTS IN PRUSSIAN MINES.

Nature of Accident.	1880.			Average of 1871 to 1880.
	Coal.	Lignite.	Metalliferous.	
Blasting	0·083	.....	0·178	0·123
Falls of rock	1·204	0·162	0·566	0·957
On underground inclined planes	0·345	1·052	0·089	0·241
Ascending and descending	0·077	.....	0·030	0·114
By falling in shafts	0·135	0·253	0·164	0·208
Miscellaneous in shafts	0·083	0·200	0·045	0·140
Transporting rock in tunnels and galleries	0·090	.....	0.045	0·168
Fire-damp explosions	0·576	.....	.....	0·186
Bad ventilation	0·231	.....	0·030	0·076
By machinery	0.077	0·051	0·060	0·068
Water	.....	0·253	.....	0·030
Above ground	0·256	0.101	0·104	0·174
Not above numerated	0·065	0·051	0·134	0·080
Total	3·222	2·125	1·444	2·465

This table strikingly shows that in all classes of mines, collieries not excluded, falls of rock are the most disastrous source of accident, and that in coal mines they far outnumber the explosions, which are popularly looked upon as such a terror to the miner, while in fact they inflict much greater loss, comparatively speaking, upon the operators.

This class of accidents is, of course, more than any other, subject to sudden variations, as the following figures of the deaths in Prussia per 1000 employés will show:

1880	0·359	1875	0·117
1879	0·221	1874	0·144
1878	0·194	1873	0·166
1877	0·095	1872	0·149
1876	0·112	1871	0 282

An interesting set of figures is given as bearing on the comparative danger of ascending and descending into mines by shafts, by ladder, man-engine, or cage. They cover an average of ten years:

	Ladders.	Man-engine.	Cage.
Men mining	739,424	71,910	640,710
Number killed	75	41	74
Number killed per 1000	0·101	0·570	0·115

This proves that hoisting the men out of the mine is nearly as safe as the use of ladders, while man-engines are the most dangerous. This, of course, refers to well equipped hoisting-works, carefully watched, which, so far as safety is concerned, compare as favorably with many of the buckets hanging from a rope in our Western camps as a flight of marble stairs to a Mexican notched stick of timber.

With that thoroughness which is characteristic of the work of German officials, the mine inspectors of Prussia gather annually a series of statistics which we believe are unique, and the importance of which is not less than the data gathered on accidents terminating fatally. The following figures give the number of accidents in Prusia in 1880 resulting in injury involving a suspension of work of one month or more:

INJURIES IN PRUSSIAN MINES IN 1882.

Nature of Accident.	Per 1000 men Employed.			Total average.
	Coal.	Lignite.	Metalliferous.	
Blasting	1·839	.....	0·521	0·671
Fall of rock	5·637	1·265	1·786	4·111
In underground inclined planes	0·711	0·051	0·119	0·479
Ascending and descending	0·160	0·051	0·149	0·144
Falling in shafts	0·077	0·152	0·830	0·084
Other accidents in shafts	0·198	0·202	0·223	0·200
Transporting rock in tunnels and galleries	0·211	0·708	0·417	0·486
Fire-damp explosions	0·717	0·050	0·015	0·445
By machinery	0·243	0·405	0·149	0·228
Above ground	1·057	0·556	0·685	0·907
Not above specified	1·165	0·506	0·461	0·927
Total	12·932	3·946	4·615	9·701

Here, too, the overwhelming preponderance of accidents by falls of rock is fully illustrated, and it may be of interest to note that of the 1029 men thus injured, 108 were totally incapacitated for work, while 921 were able to return after a suspension ranging from one to six months. Taking all the accidents together, 2428 men, out of 250,294 employed, were injured so gravely that they could not go to work in less than a month, and of this number, 211 were made invalids for life.

The statistics collected by the mine inspectors of Great Britain since the year 1851 are somewhat different in form, and some data are added

which fully confirm conclusions which it would be natural to draw from the occurrence of certain classes of accidents. The British mine inspectors are careful to enumerate both the number of accidents and of deaths. As might be expected, these figures show that, while the number of fire-damp explosions is small, they usually cause many deaths, while the other accidents show a much lower mortality.

Beyond this fact, the figures relating to the number of accidents, and not to the number of deaths, show little that is not better studied from the tables giving the latter.

COMPARISON OF FATAL ACCIDENTS AND DEATHS IN ENGLISH COAL MINES.

ACCIDENTS AND DEATHS.		Fire-damp.	Roof falling.	Shaft.	Miscellaneous underground.	Miscellaneous surface.	Total.
Average for ten years ending 1860.	Accidents.....	82·0	361·1	183·7	100·3	46·8	773·9
	Deaths.....	244·1	376·7	211·9	118·6	50·5	1,001·8
Average for ten years ending 1870.	Accidents... ...	56·5	403·1	133·3	156·1	73·8	822·8
	Deaths.....	226·7	416·3	150·5	191·6	77·5	1,062·6
Average for ten years ending 1880.	Accidents.....	42·4	436·7	120·8	175·5	87·2	862·6
	Deaths..	268·6	450·8	135·5	190·2	89·8	1,134·9

The British mine inspectors calculate the ratio of persons employed to each death, a method which does not as strikingly show the variations, because it must be remembered that greater safety is indicated by higher figures, while the ratio of deaths per 1000 persons employed indicates at a glance an improvement or a decline. The following are the figures for the mines classed under the coal mine act, including some fire-clay, ironstone, and shale mines :

ACCIDENTS IN ENGLISH COAL MINES.

Ratio of persons employed to each death.

YEAR.	Fire-damp explosions.	Fall of roof.	Shaft.	Miscellaneous underground.	Miscellaneous surface.	Total.
1851-1860..	1,008	653	1,161	2,074	4,872	245
1861-1870..	1,408	766	2,121	1,666	4,119	300
1871..	1,378	852	3,015	2,107	5,151	345
1872..	2,914	916	2,697	1,926	5,360	394
1873..	5,122	1,043	2,995	2,317	5,955	479
1874..	3,245	1,304	3,498	2,517	4,943	510
1875..	1,860	1,167	3,115	2,360	5,467	430
1876..	5,416	1,145	3,988	3,453	4,635	551
1877..	1,433	1,103	3,832	2,643	5,014	409
1878..	811	1,013	4,282	2,952	5,527	336
1879..	2,591	1,119	3,973	2,772	6,715	490
1880..	971	1,049	5,329	2,724	5,510	368
1881..	4,271	1,101	4,504	2,607	5,630	519

Ratio of deaths per 1000 persons employed.

1851-1860..	0·992	1·441	0·861	0·482	0·205	4·072
1861-1870..	0·710	1·304	0·471	0·660	0·211	3·328
1871-1880..	0·557	0·933	0·281	0·394	0·109	2·353

The upper table well illustrates the fluctuations which accidents in mines, and notably those due to fire-damp explosions, are subject to. The lower sets of figures will probably best show at a glance what the result of thirty years' of steady improvement in methods of mining, in machinery, in appliances, and in administration, have done in British coal mines, in the face of the fact that underground workings have grown enormously in extent, that shafts are deeper, less numerous, and are, therefore, the scene of wonderful activity. The averages of long periods only can efface fluctuations, which are only too natural, and present the general result so clearly proved in these figures.

The accident statistics for the mines classed under the British Metalliferous Mines Regulation Act unfortunately do not cover so long a period, having been gathered with accuracy only since 1874. Still, as the main cause of great fluctuations, fire-damp explosions, are absent, the briefer period may be accepted as showing the course of events fairly :

DEATHS CAUSED BY ACCIDENT.

YEAR.	Falls of ground.	In shafts.	Miscellaneous underground.	On surface.	Total.	PERSONS EMPLOYED. Per fatal accident.	PERSONS EMPLOYED. Per life lost.	Rate of deaths per 1000 men employed.
1874.....	40	34	15	14	103	599	547	1·827
1875.....	32	35	33	19	119	528	488	2·049
1876.....	25	16	23	6	70	871	821	1·217
1877.....	41	21	24	11	97	659	591	1·690
1878.....	27	19	23	8	77	695	668	1·496
1879.....	24	16	16	8	64	771	735	1·360
1880.....	31	21	19	13	84	645	630	1·589
1881	36	22	32	9	99	646	555	1·802
Average..	32	23	23·1	11	89·1	661	611	1·636

In Great Britain, too, the danger to life is less in metalliferous mines than in coal mines, and in both, falls of ground are the most prolific source of accidents.

On the whole, the elaborate statistics quoted are encouraging, especially when it is considered that many circumstances influence progress adversely. A good deal of the improvement is probably due also to the higher grade of intelligence among the miners, although it is probably in the direction of greater care on their part that the chances of further improvement must principally rest.

NEW PUBLICATIONS.

A MANUAL OF AMERICAN MINING LAW. By W. P. WADE. St. Louis : F. H. Thomas & Co. 1882. Small 8vo. 426 pages. (*Full Index.*)

Mr. W. P. WADE, of Leadville, Colo., has done many, not alone in the legal profession, a great service by the preparation of the little volume before us. He begins with a number of paragraphs on the rules and customs of miners, and then gives briefly a summary of the United States laws now in force. A third long chapter is devoted to "lode claims," and in a short, clear, and convenient form gives the law on all points of importance, as laid down in decisions of the courts. We have examined this part of Mr. WADE'S work with interest, and can commend it as a valuable guide to those who seek information. His chapters on land-office regulations and decisions are full and, so far as we are able to judge, accurate. A summary of the local statutes of the States and territories of the Rocky Mountains is also appended. Altogether, we can cheerfully recommend Mr. WADE'S book to those who, unfortunately for themselves, find it necessary to grapple with questions of mining law.

THE MANUFACTURE OF SULPHURIC ACID FROM PYRITES.

EDITOR ENGINEERING AND MINING JOURNAL :

SIR: It is with individual interests, as with physical bodies, the largest are the most difficult to move from any established position. Not many years ago, all the sulphuric acid used in this country was made from brimstone alone, and although scientific men had pointed out iron pyrites as an abundant indigenous source for the generation of this acid, little attention was given to the suggestion, and it is only recently that the manufacturer of sulphuric acid took into consideration the burning of pyrites. With these ends in view, special construction of works is needed, much greater chamber space is required, the breaking, and handling of pyrites will cost more, twice as much as for brimstone, and the burning process requires more attention. Those who have no practical acquaintance with kilns or burners may be inclined to think that the working of a set of pyrites-burners is a most difficult task. But it is far from that. If once the burners are in order, they remain very long so ; if the burner men know and perform their duty, and if proper supervision is exercised, the pyrites kilns give even less trouble than sulphur burners. At all events, there is a large margin left in favor of pyrites as compared with the price of the present brimstone, and unless no unforeseen difficulty arises, it is evident that the use of pyrites is much to the advantage of the sulphuric acid manufacturer. Pyrites proper has hardly any other application than that for sulphur acid making, and it is got almost exclusively for this purpose ; but such pyrites, which only contain 35 per cent sulphur, are not in favor. An ore of 35 per cent for the same weight of sulphur has much less value than a 45 per cent ore.

The wages for breaking and hammering the ore in both cases must be ruled by the gross weight of the ore, and consequently for equal weights of sulphur come to much more with poor than with rich pyrites ; moreover, under conditions otherwise equal, the unburnt sulphur in the cinders is greater. If, for instance, 5 per cent of sulphur acid is left in the cinders, this amounts, with 35 per cent ore, to one seventh ; with 45 per cent ore, to only one ninth. The two do not, therefore, compare in value as 35 to 45, or 7 to 9, but as 30 to 40, or 3 to 4. Besides, the same proportion holds good as regards cost of plant and repairs as of wages. Therefore, unless the burning is nothing but a preparation for the metallurgical treatment, the sulphur being quite a secondary matter, ores poor in sulphur ought always to be avoided as much as possible. In the analysis of pyrites for technical purposes, the percentage of sulphur is taken into account, and it is therefore generally the custom to estimate only this. If the ore has afterward to yield copper, this must, of course, also be regarded ; but where the copper, as is mostly the case, is not bought by the vitriol maker, but the cinders are returned to the seller, the estimation of copper is generally omitted in the chemical works as unnecessary. This restriction to the estimation of sulphur ought, however, only to take place with pyrites from well-known localities, whose general composition is known.

The following table gives analyses of one of our foremost pyrites mines in Virginia, namely, the Arminius Copper Mines in Louisa County, Va. :

	IRON PYRITES. I.	II.	III.	CUPRIFEROUS PYRITES. I.	II.	III.
Iron.....	43·55	43·62	46·87	41·63	27·105	20·78
Copper.....	0·18	1·50	0·20	5·37	9·72	20·825
Sulphur.....	49·501	49·27	51·649	47·51	28·105	20·78
Silica.....	6·20	4·23	....	5·024	31·92	32·95
Zinc.....	0·38	0·038	....	....	....	....
Lead.....	0·036	....	....	....	2·52	0·089
Baryta.....	0·056	....	....	....	....	....
Alumina.....	0·071	....	....	....	....	0·212
Gold and Silver	0·004	0·004	...	0·009	0·009	0·017
Lime.....	trace	0·982	....	0·255	0·045	....
Magnesia.....	....	0·338	....	0·065	....	....

To show the yield of pyrites by actual work, the following estimate will suffice, assuming the loss of sulphur in the cinders 5 per cent, although the ore can be burned down to 2 and 3 per cent sulphur. At present, brimstone "seconds" containing not over 5 per cent impurities are offered at from $30 to $35. If $30 for 2240 pounds less 112 impurities, hence 2128 pure sulphur, or 2240 pounds for $31.58. Assuming our Virginia ore 49 to 51 per cent pure sulphur, of which only 45 per cent available, hence 2240 pounds less 5 per cent, 2128 pounds at 45 per cent, 957·60 pounds pure sulphur, costing $7 in New York ; hence one ton of 2240 pounds or $16.36, which leaves a profit over and above use of brimstone

of $15.23; and the cinders from above ore containing from 58 to 60 per cent metallic iron.

A deposit like the Arminius mine, properly developed already by two shafts, 300 by 165 feet in depth, and proved over 3000 feet in length, the sulphuric ores discovered amounting to millions of tons, could supply all the sulphuric acid manufacturers in Chicago, Cleveland, Cincinnati, and the West, as well as the Southern, Middle, and New England States, with a high-grade ore of excellent qualities at a reasonable price.

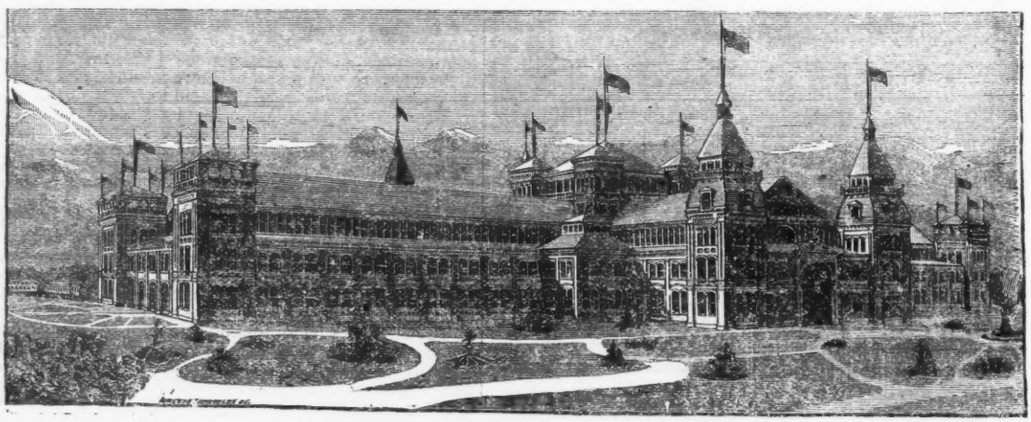
The mines are only 56 miles from tidewater at Richmond, and 1½ miles from the Chesapeake & Ohio Railroad, with accessibility by railroad and water communications to the great centers of industries and the advantage of cheap transportation. SULPHUR.

NEW YORK, Aug. 2.

THE DENVER EXHIBITION.

Special Correspondence of the Engineering and Mining Journal.

As many of the readers of the JOURNAL have probably learned ere this, the National Mining and Industrial Exhibition was opened on the 1st inst. The opening was a great success, as there was present an immense throng of people, gathered from every section of the State, from adjacent territories, and not a few from the East. The mayor of the city issued his proclamation the day previous, requesting all places of business to close at twelve M. The city was gayly decked in flags, militia and other organizations from various sections of the State paraded, and the day was generally observed as a public holiday. The opening exercises in the Exhibition building began at four P.M. The scene at the opening was a brilliant and impressive one. There were probably in the building and on the grounds 15,000 people. The exercises were of a simple character, consisting merely of music, the delivery of the oration by the Hon. W. D. Kelley, of Pennsylvania, and the starting of the machinery by Lieut.-Gov. H. A. W. Tabor. Mr. Kelley's speech, which was delivered in a slow and careful manner, was listened to closely, and was received with marked applause, especially those portions relating to the placing of silver on an equal standing with gold, and to the advocacy of a strong protective tariff. It was nearly six o'clock when the exercises were concluded, and the vast concourse of people went away satisfied that the Exhibition is destined to be not only the ablest auxiliary the mining industry of the West has known for some time, but also one of the most remarkable and interesting national exhibitions in the history of the country.



THE DENVER EXHIBITION BUILDING.

As might naturally be expected from the very magnitude of the enterprise, the Exhibition at the opening was far from complete; in fact, not half the exhibits were in place. The strikes in the East had delayed the arrival of machinery, the pavilions for the several sections were not completed, and but a small proportion of the ore specimens had been received. The most tardy of all, however, were a number of Denver exhibitors, who had applied for and had been allotted space, and who could easily have filled it a week before the opening, but who showed no inclination to do so before the last day. Others were ready and anxious to obtain and occupy the space, but these firms displayed this "dog in the manger" policy up to the opening day. I am informed by the superintendent that all space, which the holders have not signified their intention to fill, will be reassigned. Wonderful progress has been made during the few days since the opening; the floor is fast covering with interesting exhibits, and it is probable that the 15th day of August will see a complete exhibition.

Considerable dissatisfaction is expressed by exhibitors and employés with the manner in which the superintendent in charge of the space performs or tries to perform his functions. For instance, a large Eastern firm, dealers in iron castings, had applied for and had been allotted space months ago; and when their agent, upon his arrival here with a large consignment of goods, discovered that the space assigned him was *in the middle of the large water-tank* where the pumping-engines are tested, he was naturally much disgusted. Other cases are known where parties who were promised space, and shipped goods from great distances, were disappointed to find on their arrival that there was no room for them.

One of the most interesting and attractive features of the Exhibition is the display made by the railroad companies. The Atchison, Topeka & Santa Fé Railroad Company has a large and tastefully arranged exhibit of cereal products raised along its line. The Union Pacific Railroad Company presents a large assortment of minerals, various kinds of woods, and other products obtained from the country through which its road passes. The Denver & Rio Grande Railroad Company has on exhibition a passenger and a freight locomotive.

It would be futile to attempt to give a complete description of the large and comprehensive collection of mineral specimens which are and will be inclosed in this large building. As yet there is a large quantity to be received, and those already on hand are not yet completely classified. The commissioners for the several sections deserve especial commendation for their uniform courtesy and patience, sometimes under the most trying circumstances.

The accompanying illustration will convey to those of your readers whom business cares or a lack of time keep at home a fair idea of the Exhibition building and of a portion of the grounds surrounding it.

MONTANA.

The only district in this large mineral-producing territory that is represented is the Summit Valley, or, as it is better known in Eastern mining circles, the Butte Mining District. The governor of the territory did not consider the invitation to participate in the Exhibition of sufficient importance to notice, and the Butte District was the only one whose citizens had the enterprise to prepare and forward an exhibit. All the incorporated companies and many private mines are represented, and among the former are many which are well known in New York City. The exhibit consists principally of three classes of ore, copper, silver-copper, and silver ore. Among the silver mines are the Alice, Clear Grit, Lexington, the Silver Bow properties, and the Moulton. The silver ores show rich sulphurets and native and wire silver, and contain a small percentage of gold. The leading copper mines are the Anaconda, St. Lawrence, Parrot, and Bell. The exhibit from the St. Lawrence mine consists of specimens from the 100 and 200 levels, the former showing a marked improvement, and assaying very high in copper. Mr. J. B. Read, the commissioner for the district, states that the ledge is 40 feet wide, and is filled with ore, most of which requires concentration. Messrs. Haggin & Tevis have taken a bond on this mine for $165,000.

The Anaconda mine, which is also owned by the same parties, has a shaft 600 feet down, and the specimens exhibited, which are from above and below water-level, assay high in copper and present a fine appearance. The Bell exhibits some fine specimens of copper ore covered with native silver. The Parrot, which is owned by a Connecticut company, shows some ore containing 65 per cent copper and considerable native silver. This company is running a 50-ton smelter. Alice is represented by eleven pieces of ore, one of which comes from a winze below the 700-foot level and is very rich, thus dispelling the idea held in certain quarters that there was nothing in the mine below this level. A specimen of ore from the stopes of the first south vein on the 300-foot level of the Magna Charta assays $453.43 in silver and $135.62 in gold. This of course is a selected sample, but the mine is reported in fine shape, looking well, and having an abundance of ore on hand. It is now opening on the 500-foot level. The Original Butte mine sends some large and fine looking samples of silver-bearing ore taken from the ledge in the 300-foot level, where the ore-chute is reported to be remarkably strong. Gagnon shows a large piece of high-grade silver ore on which the native silver is plainly discernible. They have recently opened up a chute of ore in the 400-foot level that is 65 feet long and 5 feet wide, and which samples well. What Butte really needs, and greatly needs, is increased smelting facilities. All the smelting ores in the district can be easily and inexpensively treated, as the majority of them are said to carry their own fluxes, and some rich manganese mines are opening. One specimen in the show-case from the Bluebird mine assays 90 per cent of oxide of manganese.

COLORADO.

SAGUACHE COUNTY.

This county, comparatively little known as a mining section, was one of the first to have its pavilion in shape. It is in the northern part of the great San Juan. Several promising districts are located within its limits, which send some good specimens of their argentiferous ores. The districts represented are Kerber Creek, Blake, and Ford Creek, though Captain L. D. Phillips, the commissioner for the county, informs me that Crestone, Carnero, and McDonald districts contain some excellent mines. Of all these districts, Kerber Creek is probably the best known. Prominent among its mines which are represented are the Josephine, the Rawley, the Exchequer, and the Whale. The county's exhibit aggregates about 10 tons.

FREMONT COUNTY.

The commissioners for this county, Messrs. L. E. Frank and E. Weston, state that about one half their exhibit is yet to arrive. The display, though not occupying much space, is quite varied in its character, including coal and gold, silver, copper, lead, and iron ores. At each side of the

pavilion is a handsome column of Brandford sandstone which comes from within five miles of Cañon City.

SUMMIT COUNTY.

The four districts comprising this county are well represented. The Snake River District sends half a car-load of specimens and another half car-load is on the way. Eagle River District, which includes within its borders Holy Cross, Gold Park, Red Cliff, and Battle Mountain, is well represented. There is also a considerable quantity of specimens from Ten Mile, which includes Kokomo, Wheeler, Frisco, and Robinson Camp. There is on exhibition a 200-pound chunk from the Robinson Consolidated. Blue River District, within whose borders the camp of Breckenridge is situated, sends one car-load of specimens and promises more. Breckenridge has on exhibition a piece of lead carbonates weighing about one ton. It is expected that this section will be represented by a greater variety of carbonates than any district except Leadville. The commission for the county is as follows: R. A. Sankey, President; Judge Silverthorn, Blue River District; George A. Brown, Snake River District; Judge Wheeler, Ten Mile District; H. L. J. Warren, Eagle River District.

HINSDALE COUNTY.

This section of the State, which comprises the five districts of Galena, Park, Sherman, Lake, and Cimarron, is well represented by about 12 tons of very good ore. The commissioners for the county, Messrs. John S. Hough and W. P. Harbottle, inform me that the principal mines exhibiting are the Ute, Ulé, Palmetto, and Frank Hough, in Galena District; the Black Wonder and the World's Wonder, in Park District, which send some high grade-galena; the George Washington, in Sherman District; and the Sulphuret, the John Sherman, and the Golden Wonder, in Lake District; the two former of which exhibit some fine-looking silver-bearing ore, and the latter gold-bearing quartz. There are many other mines which might be named which send equally fine-looking specimens.

PARK COUNTY.

The pavilion occupied by the specimens from this county will contain a great variety of gold, silver, lead, and copper ores, aggregating in weight about 25 tons. The following districts are included in Park County: Montgomery, Bross & Lincoln, Loveland Hill, Buckskin, Mosquito, Pennsylvania, Sacramento, Horseshoe, Fairmount, Western Pass, Pulver, Old Tarryall, Georgia Gulch, Silver Heels, Hall's Gulch, Geneva Gulch, and Como. The last-named district is best known on account of its iron and coal and its carbonate deposits. There is a very large number of mines represented by specimens; but the best known are the Kansas Consolidated, in Montgomery District; the Dolly Varden, Moose, Russia, and Silver Gem, which send some fine silver ores, in Bross & Lincoln District; the London, Orphan Boy, and Sunny South, in Mosquito District; the Hock Hocking and the Western, in Pennsylvania District; the Sacramento and Little Emma, in Sacramento District; and the Mudsill (which sends some rich chloride ores and native silver) in Horseshoe District. The exhibit shows great variety, including gray copper, carbonates of lead and copper, sulphides, gold, silver, and nickel ores. The commissioner for the county is R. A. Kirker. CHIEL.

THE BATOPILAS MILL—A CORRECTION.

EDITOR ENGINEERING AND MINING JOURNAL:

SIR: In revising my paper on the Batopilas Mill for final publication in the Transactions of the American Institute of Mining Engineers (published in its *unrevised* form in your columns), I have taken the opportunity to correct the unintentional omission of the name of Mr. John Magnus Adams, of San Francisco, in connection with it. Many of the peculiarities of that mill are due to the friendly co-operation of Mr. Adams, and to his extensive experience of Frue vanners and milling. The difficult work of superintending the contracts in the shop, and shipping the machinery, was placed by me entirely in his hands, with full confidence, and was most carefully done by him. By giving this note the same publicity you gave the unrevised paper, you will greatly oblige me.

Yours truly, JOHN C. F. RANDOLPH.

THE VALUATION OF IRON MINES IN NEW YORK AND NEW JERSEY.

Prof. John C. Smock, assistant geologist of New Jersey, in a paper presented at the Washington Meeting of the American Institute of Mining Engineers, gives interesting data collected during the census, for a valuation of mines of iron ore, his figures relating particularly to those of New Jersey and New York. The mines which were selected for the several groups and mining districts include nearly all of those from which the most full and carefully filled returns were received by the Census Bureau. They also were representatives of their respective districts, so that the averages obtained from them are good types of these districts. The New Jersey mines appear in six groups, each containing from three to eleven mines, or in all, thirty-four mines. The magnetic iron ores of New York are in four well-marked groups, and there are twenty-six mines in them. Then follow the red hematite mines of St. Lawrence and Jefferson counties; and lastly, the brown hematite groups of Dutchess and Columbia counties, and those of the adjacent parts of Connecticut and Massachusetts. The whole number of mines represented by the table is eighty-eight, of which twenty-eight are hematite ores. The first column gives the value of the real estate; the second that of the plant; the third is the sum of these two, or the capital invested. Then follow the number of men employed, the amount of wages paid during the census year, the value of materials used in mining and preparing the ores for market. The seventh column gives the total expenditures, or cost of the ore. The product in tons is in the eighth column, while the cost per ton is in the ninth. The last column of the table shows the ratio between the real estate value and the product.

The first observation to be made on this table is the apparent discrepancies when capital and product are compared, as is done in the last column. The difference in ratios of product to capital are greatest among the groups of magnetic iron ore mines of New York, and between the hematites of Connecticut and Massachusetts. In the latter $3.17 of real estate produced a ton of ore, whereas, in Connecticut, it required an investment valued at $12.23, or nearly four times as much. Although much of this difference is inherent in the mines, and due to great disparity in actual value, somewhat of it must be credited to imperfect valuation, and a more accurate method of valuation would tend to the equalization of these ratios. Another observation to be made is the variation in the cost of the ore per ton, ranging from $3.96 to $1.57. The greater cost is found to be in the groups of deeper mines. The larger proportion of open workings or pit work reduces the average cost. The larger size of the ore-bodies also affects favorably the cost; and the more expensive the plant, when compared with the total expenditures, the less is the cost of the ore. And, in general, the labor expenditure seems to enter more into the cost than the value of materials used, although the separation of these classes of expenses is nearly always incomplete. Other points for consideration and comparison will suggest themselves to the reader who may examine the table.

TABLE OF SELECTED STATISTICS OF IRON MINES.

	Mining Districts and Groups of Mines.	Capital invested in real estate.	Capital invested in plant.	Total invested capital.	Number of men employed	Amount of wages.	Value of materials used.	Total amount expended.	Tons of ore mined.	Cost per ton of ore.	Total capital in real estate per ton of ore mined.
I.	Warren Co., N. J., and Sussex Co., N. J.	$273,200	$72,104	$345,304	411	$118,751	$23,962	$142,663	43,607	$3.27	$6.24
II.	Sussex Co., and western part of Morris Co., N. J.	205,000	71,000	276,000	374	139,483	53,511	191,949	85,595	2.24	3.44
III.	Chester, Morris Co., N. J.	250,000	40,200	290,200	233	66,147	16,152	82,299	40,460	2.03	6.15
IV.	Mine Hill, Iron Hill, and Hibernia Mine, Morris Co., N. J.	710,000	174,800	884,800	672	305,083	104,506	409,589	117,085	3.10	6.07
V.	Mt. Pleasant—Mt. Hope Range, Morris Co., N. J.	540,000	152,000	692,000	639	300,000	125,088	426,083	125,085	3.39	4.39
VI.	Northern part of Morris Co., N. J., and Orange Co., N. Y.	825,000	159,770	1,064,770	1,017	425,314	161,709	586,393	147,668	3.96	6.45
VII.	New Jersey Mines	2,066,240	610,464	3,676,704	3,046	1,416,725	494,113	1,880,838	560,340	3.35	6.34
VIII.	Orange Co., N. Y.	800,000	62,300	867,300	183	110,624	17,000	127,624	77,091	2.19	10.45
IX.	Putnam Co., N. Y.	622,750	44,805	667,555	434	165,46	46,000	211,465	66,619	3.16	9.91
X.	Essex Co., N. Y.	1,474,477	505,485	1,979,972	2,106	457,235	231,408	688,643	504,845	1.57	2.91
XI.	Clinton Co., N. Y.	575,000	115,500	690,500	699	180,570	48,300	228,870	80,645	2.84	4.66
	Red Hematite.										
XII.	St. Lawrence and Jefferson Counties, N. Y.	368,000	102,000	460,000	366	152,660	28,500	181,160	84,374	2.15	4.24
	Hematite.										
XIII.	Dutchess and Columbia Counties, N. Y.	966,049	208,000	1,174,049	593	181,067	68,945	250,092	124,037	2.00	7.73
	Hematite.										
XIV.	Connecticut..... Berkshire, Mass...	383,000	33,500	416,500	180	60,607	20,563	81,220	31,141	2.61	12.23
	Hematite.	167,000	59,000	216,000	311	109,121	41,792	150,913	49,454	3.05	3.17

The enduring character of our iron mines in New Jersey and in New York is here to be noted, as it bears so closely upon this question of their value; it is particularly true of the magnetic iron ore mines. Many of them have been worked steadily for long periods, and some of them figure in our colonial history. Their production previous to 1840 was comparatively small, and the larger part of the aggregate amounts obtained from them belongs to the past three decades. Notwithstanding the extent to which they have been opened, there are no signs of exhaustion. It seems entirely safe to assert that many of these ore-bodies, now so largely explored, are practicably inexhaustible, at least by known methods of mining.

Assuming the rate of production of the census year, it is easy to ascertain how long it would have taken to raise the known amounts of ore estimated as coming from them. From fifteen to thirty-five years would have sufficed at the present rate in all of the larger mines, both in New Jersey and New York, and in others from 4 to 10 years. The average, for safety, Mr. Smock puts at 15 years. Having assumed the working term and the annual product, the remaining essential factor in all cases is the profit per ton. It was obtained by subtracting the cost from the average price at the mines in the several districts, as follows:

	Average price.	Cost.	
New Jersey mines	$4.16	$3.38	$0.78
Orange County, N. Y.	3.00	2.19	0.81
Putnam County, N. Y.	3.00	3.16	0.16
Essex County, N. Y.	3.30	1.57	1.73
Clinton County, N. Y.	4.50	2.84	1.66
St. Lawrence and Jefferson counties, N. Y..	2.70	2.15	0.55
Dutchess and Columbia counties, N. Y.	3.90	2.00	1.90
Connecticut mines	4.80	2.61	2.19
Massachusetts mines	4.00	3.05	0.95

These elements are sufficient to give the basis for valuations, so far as the several districts are concerned. The problem is in the nature of an annuity; and, knowing the term and amount received annually, the question is, What is it worth? In the case of the New Jersey mines, the value of the real estate was placed at seven times the annual dividend or amount of profits. Thus, for example, taking the 34 mines in New Jersey, according to the table above, their product was 560,340 tons, which, at 78 cents per ton, would yield a dividend of $437,065, and that multiplied by seven gives $3,059,456 as their valuation. It remains to fix the rate of interest and to allow for a return of the investment, or what is known as a redemption fund. Authorities differ so widely that it is almost an arbitrary matter to assign any figure. The mean range is from 8 to 20 per cent. The rate allowable for redeeming the principal should not exceed 4 per cent—that of our most reliable trust-fund investments.

Owing to the great permanency which characterizes many of our iron-mine properties, 10 per cent has been thought to be a reasonable profit upon the capital, and 4 per cent sufficient for its redemption. Turning to Hoskold's tables, we find that the present value of $1 per annum in fifteen years, allowing interest at 10 per cent upon the purchase-money, and redeeming the capital at 4 per cent, is $6669, or nearly the arbitrary multiplier which was used in the case of the New Jersey mines. With a higher rate of interest, for example, 20 per cent, the multiplier would be 3·061. These are the general principles which have been employed in the valuation of nearly all of the mines of New Jersey and in many of New York. As already stated, they are subject to almost endless modification, owing to the ever-varying combinations of the other essential elements, which need to be taken into account, and which vary almost with every mine.

STEEL-WORKS IN CANADA.

The first establishment for the working and manufacture of steel in Canada has been started at New Glasgow, Nova Scotia. The main building, 80 feet wide, is already up, a branch siding from the Intercolonial Railorad has been laid, and the work of building foundations for furnace, regenerators, etc., is proceeding with. The works are in charge of Mr. Graham Fraser, whose skill and energy developed the adjoining forge-works out of a modest nail factory. Mr. Fraser has just returned from England, where he has ordered the necessary plant of what is believed to be of the best modern type. For instance, the steel ingots will be worked up under the rolls, instead of as usual under a steam hammer by a reversing engine of two 30-inch cylinders. The site of the works is well selected, near the well-known Pictou coal-fields, and on the bank of the East River, where cheap fuel should give them a decided advantage over rival establishments in Canada.

THE TOTAL WRECK MINE.

EDITOR ENGINEERING AND MINING JOURNAL:

SIR: To escape the heat of Tucson, I took a stroll over here yesterday to look at the Total Wreck mine, and the 20-stamp mill now in course of erection and which will be completed in about a month. I have heretofore given you a full description of the mine. The calculation made to-day from actual measurement gave over 40,000 tons of ore now ready for reduction. This will require two years of constant work with this mill. The mine shows more good ore for the development than any mine so far found in the territory.

The mill has all the modern improvements, having been planned and constructed by W. A. Armstrong, formerly of Virginia City, who has had a large, if not the largest, experience in such matters on this coast. No expense has been spared in its construction. This property will take rank soon with the best paying mines, and make a record in time comparing favorably with the Ontario, of Utah. It is to such mines as this that we have to look to give confidence and permanence to the mining interest of the country. The management is now, and has in the past been, conducted on business principles. It is only a pity that many others were not managed in like manner. Had the Santa Marias or Bradshaw been managed as this property is and has been, the large amount of money lost in and by the citizens of Gotham would not have been a cause of complaint. I ought not, perhaps, to have mentioned them because there is no comparison between the properties. The Santa Marias and Bradshaw never had any merit, while this is truly a meritorious property. BENDIGO.

TOTAL WRECK, EMPIRE DISTRICT, ARIZ., July 30.

PROGRESS IN SCIENCE AND THE ARTS.

Copper-Plating with the Aid of Dynamo Machines.—Recently a party of gentlemen connected with the Postal Telegraph Company visited the plant, now purchased by the company, for coating steel telegraph wire with copper. The mill where the copper-coated, steel-cored wire is made for the company was formerly occupied by Wallace & Sons, who first made wire of this character. The mill contains 200 vats filled with a solution of blue-vitriol. Twenty-five large dynamo machines furnish the electric power necessary for the electro-plating process. In the vats, at the time of the visit, undergoing the process of coating, were 75 miles of steel wire, which is sent slowly winding over a spiral coil through the vats until a sufficient coating of copper is obtained, this process occupying 60 hours. From each ton of the copper used in this operation, between 15 and 20 ounces of silver are precipitated in the bottom of the vats, a quantity, it is claimed, sufficient to pay the actual expenses of the coating process. The rate at which the steel wire of 200 pounds' weight to the mile is coated with 500 pounds to the mile of copper, with the existing facilities, is 10 miles per day. Two other engines are erecting which will give the factory a capacity of 30 miles per day.

Distributing Hydraulic Power.—A company has been formed in London to provide large towns with hydraulic power on the high-pressure accumulator system now universally adopted in docks and other establishments where such power is constantly required. The consumer will pay in proportion to his actual consumption. The company intends to begin business in London, and has acquired, by a special act of Parliament, the right to carry on its operations over a large area in the center of the city. It has also power to take 1,000,000 gallons of water daily from the Thames. It is stated in the prospectus that the practicability of the scheme for supplying hydraulic power has already been satisfactorily tested in Hull. In several towns on the continent, especially in Switzerland, where the necessary pressure is easily obtained, without pumping machinery, by the action of gravity, water-power is largely used on the company's plan. It is intended to begin with a pumping-engine of 500 horse-power and about 10 miles of mains.

The Edison Light in one Building.—Some idea of the quantity of materials, especially metals, which the electric light companies consume, may be obtained from the following statement of the work of putting 5588 Edison incandescent electric lights into the great Mills Building, in this city: The conductors consist of 1650 feet of Edison's patent electric tubes, 628 feet of lead pipe containing taped wires thoroughly insulated, 23,658 feet of zinc tubes, 75,909 feet of wire conductors, and 24,162 feet of wooden receptacles placed between the floors, to hold the system of distributed wires. The total amount of wires used was 3774 pounds, besides 48 vertical main cut-outs, and 253 division cut-outs.

THE Mansfeld Copper-Works, Germany, smelted 445,997 metric tons of ore during the year 1881, producing 10,999 metric tons of refined copper, against 9813 tons in 1880, and making 59,836 kilograms of silver, compared with 51586 kilograms in 1880. The dividends distributed were 3,110,400 marks, notwithstanding the fact that the cost of mining was higher.

A LARGE EMERY WHEEL.—Some months ago, the Tanite Company, of Stroudsburg, Pa., received an order from one of the foreign governments for a solid emery wheel 36 inches in diameter, and 8 inches in thickness. A wheel of this size weighs about 800 pounds, and its list price is $500. A few weeks since, the company received a cable order from its Liverpool house for a special machine on which to run this immense wheel, which it is now constructing. It is the largest the company has yet built, and is from an entirely new design, and will weigh, when complete, 2200 pounds.

A NEW WAY OF MAKING WIRE ROPE.—At the Royal Agricultural show at Reading, England, Messrs. G. Cradock & Co., of Wakefield, show steel wire rope, the special feature of which is that, instead of the strands being spun in one direction and laid in the other, they are both spun and laid in one direction. A coil of rope was shown, about 500 yards in length, which had been at work some time in an incline in a colliery of the Bedworth Coal and Iron Company. This was $\frac{3}{4}$ inch in diameter when new, and had worn down to $\frac{9}{16}$ uniformly, and at the lower end was down to $\frac{1}{2}$ inch, without breaking anywhere.

A NEW EMERY WHEEL DRESSER.—Our attention has been called to a tool recently brought out by the Novelty Belt Hook Company, of Hartford, Conn., for truing, shaping, and removing the glaze from solid emery wheels. It is intended to do the work hitherto performed by diamond tools. The Huntington emery wheel dresser has a head which contains a series of independent-sharp-toothed cutters, loosely journaled upon a hardened steel pin in such a manner that, while they rapidly cut the emery wheel, they are not perceptibly worn by contact with it. For use on coarse or large wheels, and to afford protection to the points of the cutters, there are placed between them disks of steel of same quality and temper as the cutters.

RAILS ON THE GREAT CENTRAL BELGIAN RAILROAD.—The Great Central Belgian Railroad has prepared some elaborate statistics as to the wear and tear of rails upon its system. It appears that after twelve years' service only 0·38 per cent of the steel rails laid down upon its system in 1869 had been withdrawn in 1881. On the other hand, the proportion of the iron rails laid down in 1869 and withdrawn in 1881 was 95·74 per cent of the whole number employed. Since the organization of the Great Central Belgian Railroad Company in 1865, it has employed 79,116 tons of rails, of which 67,569 tons were iron rails, and 11,547 tons steel rails. Of the iron rails laid down, 31,874 tons have been replaced, while of the steel rails laid down only three tons have been replaced.

THE PULSOMETER PUMP ON BOATS.—The success of the "new Pulsometer steam pump," arranged with boiler on small boats built especially for the purpose of pumping out coal boats and barges, wrecking purposes, washing coal, putting out fires, filling boilers after cleaning, etc., by Messrs. Crowthers, Musgrave & Co., Eli Leonard & Son, O'Neal & Co., James McCleary, and others on the Monongahela River, has caused a demand for such boats. Messrs. Crowthers, Musgrave & Co. write that they can propel their boat four miles up stream and back in an hour by having the new pulsometer arranged to draw the water in at the bow and forcing it out at the stern. Messrs. Gray, Shook & Co., 46 Water street, Pittsburg, Pa., agents for the Pulsometer Steam Pump Company, have lately built several of these boats, one of which has been purchased by Mr. James Sweeny, of New Orleans, and sent South.

REDUCTION OF SILVER ORES IN THE MOIST WAY BY HYDROGEN.—M. P. Laur, in a paper read before the French Academy of Sciences, states that whenever hydrogen is generated in a liquid containing silver sulphide, chloride, bromide, and iodide, the silver compound is destroyed, and the silver is deposited in the metallic state. This reaction, he suggests, may be utilized in metallurgy in the following way: The silver ore is ground to a fine powder and put in a cast-iron vessel, into which is poured a weak alkaline lye, 1 part soda to 100 parts water. There is also prepared an amalgam of 3 parts tin to 100 parts mercury, which is added to the ore, and the whole is raised to a boiling heat. The hydrogen decomposes the argentiferous compounds. The silver amalgamates with the mercury, the sulphur passes into the liquid as an alkaline sulpho-stannate, while the chlorine, iodine, and bromine give corresponding sodium salts. There is no appreciable loss of mercury. This reaction might be usefully substituted for the Mexican "Cazo" and the California "Pan" processes. It is believed by M. Laur that the waste of mercury would be reduced, and the extraction of the silver be made more complete.

GENERAL MINING NEWS.

ARIZONA.

EMPIRE DISTRICT.

The Tucson *Citizen*, in speaking of the mines of this district, says:

Many locations have been made, and of course only a small portion of them will be developed into paying mines. So far, the developments in the district have been flattering.

FORTY-NINE.—This claim has a shaft down to the depth of 93 feet. Nearly every thing taken out in working this shaft has gone on to the ore-dump, the waste-dump being very small. At the bottom of the shaft, a cross-cut has been made over twenty feet, all in the ledge and ore. On the surface, this ledge has been traced the whole length of the claim, and is also found on several extensions, which will reap the benefit of its development. The character of the ore is chloride and carbonate. It is easily crushed and free milling, having but little copper. The grade of the ore is not high, but the average makes a first-class working proposition, and the large body already disclosed and the continuity of the ledge leave no room for doubt as to its permanency. The quantity of the ore will warrant the erection of a 40-stamp mill for its reduction. In many places, in

the last fifty feet, the shaft has been widened to twelve and fifteen feet, all in ore, and in no place showing any hanging-wall.

MICHIGAN BOY.—This is a prospect of great promise, the surface indications comparing favorably with the best mines in the district. It appears to be a contact between quartzite and lime, and a prospect-shaft sunk upon a broken-up portion of the ledge shows some very good grade ore. This mine has just been bonded, and a contract has been let to sink fifty feet. This mine lies in the vicinity of the Forty-Nine, the vein running in the same direction and showing the same general characteristics.

THE PAUTANO MINING COMPANY.—This company owns a group of seven mines at what is known as the "basin." Upon these mines considerable development has been made with satisfactory results. The Side Wheel has two shafts down about 50 feet each, and it is expected that cross-cutting will develop a body of high-grade ore. A recent purchase of the company, the Jefferson, located in the basin, is showing some of the richest ore in the district. The ledge is traceable for a long distance, and a number of prospect-holes have been sunk, showing high-grade ore. The company has made a contract for running a tunnel 50 feet on the ledge, and in one day ore was taken out sufficient to pay the contract price. Shipments of ore will also be made to Pueblo, Colorado, for working.

TOMBSTONE DISTRICT.

The Tombstone *Epitaph*, in its weekly mining review, says: The past week has been uneventful in local mining matters. Things are running along without material difference, save in the number of new prospects that are opening up and developing. The reports from the most prominent mines are as follows:

EAGLE.—The shaft is down about sixty-six feet, and the ledge is widening as rapidly as the shaft sinks. A streak of extremely rich ore has hugged the hanging-wall for the past few days, and, unless appearances are deceitful, something big may be expected in a few days. The ground is pretty hard, and progress is not made as rapidly as heretofore.

EMPIRE.—The north drifts in the 400 and 450 levels are going along and looking well. The west cross-cut in the 450 level is making good progress. The winze from the 400 to the 450 was connected recently, at a distance of 500 feet from the shaft. The usual quantity of ore is hoisted, and the mine is looking in excellent condition.

GRAND CENTRAL.—Good progress is made on the drifts and cross-cuts on the 500 and 600 levels, but nothing has been struck as yet. The ground is getting softer, and the works are driven with more rapidity than heretofore. The prospects indicate ore in the near vicinity, and we should not be surprised if a strike was reported one of these days. The stopes throughout the mine are looking well, and the usual amount of ore is shipped to the mill.

INGERSOLL—The uprise from the 80 level will reach the surface some time this week. The works heretofore reported are continued, and good progress is made. The ore-bodies are holding out well, and the mine is in excellent condition all the way through.

RANDOLPH.—The developments are equal to the general character of those reported for the last month. The ore-bodies reported in the second and fourth winzes are immense, fully 12 feet of ore being exposed without encountering a wall. More than 100 tons of ore were extracted last week without any stoping. All the work done is in the nature of developments, and no ore is hoisted except what is actually in the way. Shipping ore to the mill will begin soon, and the first run will be made in a few days.

SAN DIEGO.—The shaft on this mine has attained a depth of 378 feet, and sinking is still continued. The south drift on the 350 level is in 167 feet and looking well. The north drift on same level has been driven 135 feet. The north drift on the 266 level is in 91 feet. The mine is in excellent condition.

STONEWALL.—The west winze in the 150 level is down 150 feet, all in good ore. The south cross-cut in the 160 is in 30 feet. A rich streak of ore accompanied the cross-cut all the way. Stoping is continued in the 160 level, and about 125 tons of ore are shipped daily.

TRANQUILLITY.—Work has been continued, and the mine is showing up in the most flattering manner. The steam hoisting-works were started up during the past week, and it is expected that connection will be made with the whip-shaft in about ten days. The quality of ore extracted remains about the same, and according to present indications an immense body of rich ore can not be avoided. Ten stamps of the Girard mill continue at work on Tranquillity ore, and as soon as the proper connections are made, doubtless the entire facilities of the Girard mill will be devoted to Tranquillity ore.

VIZINA.—The south drift on the 400-foot level is extended 80 feet in ledge matter. The north drift 125 in quartz or porphyry. The drift going west at 300 feet is 105 feet. Expect to strike ledge and connect with uprise from 400-foot level at about 150 feet. Still shipping a fine quality of ore from the upper level.

CALIFORNIA.

THE BODIE DISTRICT.

The Bodie *Free Press* reports the operations for the week ended August 1st as follows:

BODIE.—During the past week, the mill crushed 112·805 tons of ore. There were 154·365 tons hauled to the mill. The average assay value of the ordinary pulp was $58.57; that from the sacked ore was $682.99 per ton. The average value of the whole pulp was $102.78 per ton. There were 336 car-loads of ore extracted from the mine.

NOONDAY AND NORTH NOONDAY.—The lower workings continue to develop rich ore, on which the mill will start at an early day.

ORO.—The Oro north drift, 714 level, is in 41 feet. The ledge continues well defined. Assays run from $30 to $640 per ton.

RED CLOUD.—In the past week, a ledge was cut 20 feet wide in the east cross-cut, 700 level, 333 feet from the shaft. There is some rich ore next to the hanging-wall, and several feet of that portion of the vein will be good milling ore. A drift has been started north on the vein. The shaft is 785 feet deep.

STANDARD.—During the past week, Standard Consolidated extracted 1316 tons of ore. No special changes have taken place underground.

GREENVILLE DISTRICT.

CHEROKEE.—The superintendent telegraphs, August 8th: Struck a good body of ore in Cherokee new shaft. Three feet of pay. Will go 810 easily.

MONITOR.—The Greenville *Bulletin* says: The following condensed summary will give a correct idea of the property: two ledges, one on each side of a ridge that rises 800 to 1000 feet above Soda Creek; the mill about midway up the ridge; the main tunnel about 50 feet above the mill and 1400 feet in length; the ledge in the tunnel opened 900 feet with 800 feet of backs. About 200 feet above the tunnel are the open cut and two short tunnels on the Arctic ledge. All around the unbroken forest covering the ridge and all the neighboring mountains to their summits. A very large body of ore is in sight; the quantity constantly increases as the works are pushed farther into the mountain.

CANADA.

NOVA SCOTIA.

MOOSE RIVER.—Mr. C. A. Scott informs us that he has put through five tons of the vein-matter of this mine, and found it to yield $27.30. Besides, he obtained from the lot, at the lowest estimate, fully $30 worth of specimens, making a total yield, therefore, of $33.30 per ton.

COLORADO.

GILPIN COUNTY.

SLEEPY HOLLOW.—A company entitled the Sleepy Hollow Gold Mine, Limited, has been formed in London, with a capital of £50,000, to work the Sleepy Hollow mine, which is located near the Gregory, Bobtail, and Fiske, on the same lode as the latter. Mr. Thomas Rickard, reporting on the property, says that from £4000 to £5000 will be found to be sufficient capital to carry out developments, of which £1000 would be necessary for hoisting apparatus. Mr. Philip Medford estimates a yearly profit of $100,800, and Mr. E. Le Neve Foster speaks favorably of the property.

LAKE COUNTY.

CARBONATE HILL.—In a recent letter to the Leadville *Democrat*, a correspondent gives the following information regarding the prospects and mines of Carbonate Hill: The more thorough exploration and development of the Carbonate Hill contact is a matter which should receive greater and immediate attention, especially the upper portion of the hill and the large territory extending across Graham Park to the Iron Hill fault. Beginning with the lower shafts on the Catalpa, Evening Star, Morning Star, Waterloo, and Henriett locations, the ore-chutes have been traced to the eastward for a distance of 1500 to 2500 feet. In almost every instance, the ore-bodies have continued uninterrupted, and frequently show improvement in strength, as greater distance and depth are gained from the outcrop. Commencing with the lower or western ends of the Catalpa and Evening Star mines, where the ore is found almost at the surface, it has been followed in its dip into the hill, maintaining remarkable regularity, as was shown in sinking the following shafts, which encountered the ore at depths as follows: Main shaft of the Evening Star, 150 feet; Upper Waterloo shaft, 330 feet; Big Chief, 485 feet; Clontarf, 490 feet; Brookland, 535 feet; Wolfe Tone, 635 feet. The development in the new Brookland shaft, made during the past week, is particularly favorable to further prosecution of work in the territory surrounding. A considerable distance to the southward, the ore-chutes of the Carbonate and Little Giant mines are opened, showing the conventional northeastern course. The strength and uniformity of these ore-bodies give color to the belief that they will extend through the western portion of the William Wallace location, and, maintaining their trend, will be found successively in the Castle View, Big Chief, Wolfe Tone, and southern portion of the Agassiz lode, at greater depth than any of the shafts have yet attained. A prominent mining engineer, who has made a sectional view of this district from shafts and drill-holes put down has demonstrated that the dip of the contact continues uninterrupted from the Carbonate mine outcrop to the fault on Iron Hill, just before reaching which the porphyry has a thickness of 1000 feet. This gentleman expresses confidence in the future of the entire territory between Carbonate and Iron hills, and believes that where the contact is found barren near the western outcrop, it will more likely prove richer as it is followed in its dip into the hill. Carbonate Hill proved itself one of the largest contributors to the metal output of the district, and to-day has still greater undeveloped resources than any other section of Lake County. There is a large stretch of territory yet to be opened on that hill, and while work is in progress in this direction, it is not carried forward as rapidly as it should be, and as fast as past developments warrant.

LEADVILLE SMELTERS.—The production of the Leadville smelters, during the month of July, shows 3604 tons of base bullion, which, after deducting for dross and the precious metals contained in the same, would leave at least 3500 tons of lead. Every month so far this year has shown a gain over the corresponding period of last year. During the fore part of the year, one month showed a product of 4000 tons, the output of the Leadville reduction-works. There is now very little question but that the product for the year will aggregate between 40,000 and 43,000 tons. The shipments of lead during the first six months amounted to 21,898 tons, and up to date to 25 500 tons. There have also been shipped to Pueblo, Kansas City, and other smelting centers more than 30,000 tons of ore to date, this year. At an average of ten per cent of lead in these ores we have a grand total production of lead of 28,500 tons. How long this production will be maintained, it is difficult to predict. It shows, however, the important part Colorado, and particularly Leadville and its tributary camps, occupy in the mining world, in the production of lead, at the present time.

LITTLE PITTSBURG.—The official report for the week ended July 31st shows: Ore shipped, 112 tons: settled for, 719 tons; balance shipped and unsettled for, 91 tons. During the month of July, 522 tons of ore were shipped and 719 tons settled for.

MONARCH DISTRICT.

From the Leadville *Herald* we take the following notes on this district: The Madonna smelter is running very successfully, and turning out a car-load of bullion daily. The smelter is using only the ore from the Monarch Company's mines, which produces a moderate grade of bullion, but will increase the grade by mixing in ore from the Monarch and other high-grade mines. It is the intention of General Tuttle, manager of the company, to increase the capacity of the smelter by the addition of two 50-ton stacks in the fall. The company's mines are looking exceedingly well. The main drift, which has been run to connect with the upper workings, shows ore all the way, and it is estimated that the ore-reserves are sufficient to furnish the smelter with a two years' supply of ore.

The Fairplay, located just above the Madonna smelter, has developed a body of high-grade sulphuret ore, the extent of which has not been defined. The Eclipse has during the past week caught ore in the tunnel which has been run to tap the ore-body about 250 feet below the upper workings, and about fifteen tons of ore have been taken out in driving the tunnel. The main shaft, now at a depth of about 185 feet, also shows good ore in the bottom. The ore-bodies previously developed on the forty-five-foot level are still untouched.

Several new and promising discoveries have been made on Limestone Mountain, to the west of the Madonna group; but as yet their extent is not definitely known. The district generally shows considerable activity, and the indications are, that it will assume a prominent place as a producer.

MOSQUITO DISTRICT.

SUNNY SOUTH.—Ore of remarkable richness has been discovered since the recent reported strike. This property is developed by a tunnel which has been run in on the lead for a distance of 70 feet. At 65 feet, an inch streak of ore was cut, which rapidly widened, and on sinking on it for a depth of six feet, the pay-streak increased to two feet of solid ore. During the sinking, 28 sacks of ore were taken out, which, on being tested at the London mine, the native silver being thrown out, yielded returns of 385 ounces in silver and 20 per cent in lead.

PUEBLO COUNTY.

COLORADO COAL AND IRON COMPANY.—This company is now turning out 125 tons of Bessemer steel rails per day on a contract made last year for 30,000 tons, the contract price being $70 per ton for a part and $65 a ton for heavy sections It is expected that the product will soon be increased to 150 tons per day.

SUMMIT COUNTY.

ROBINSON CONSOLIDATED.—A dispatch dated August 9th says: Work was begun to-day on the Robinson Consolidated mine. Three great pumps are handling the water splendidly.

DAKOTA.

CALEDONIA.—The mill will resume work in about three weeks. Every thing is looking well at the mine.

FATHER DE SMET.—The superintendent's report for the week ended August 1st shows: Ore extracted from first level, 2000 tons; second level, 1200 tons; third level, 250 tons. During this period, 3500 tons were milled. The north-end tunnel is now in 717 feet; Golden Gate cross-cut, 153 feet; Golden Gate header, 180 feet; and third-level header, 63 feet.

GOLD STAR.—The hoisting-works are in place, and the mill will soon resume operations.

HOMESTAKE.—A shaft was begun August 4th by this company on the Ameri-

can Flag lode, adjoining the Homestake, and considered equally good with the latter.

SITTING BULL.—This smelter has been shut down, as the smelting ore is exhausted. The output of the mine is now almost wholly milling ore, and the Florence mill is running continuously.

IDAHO.

From a letter written from Bullion to the Salt Lake *Tribune* we take the following: It was in May, 1880, that the first claim was staked here. The Mayflower, Bullion, Jay Gould, and some others, all on the same ledge, were staked and recorded at about the same time, and work soon began upon the Bullion and Mayflower. Since then, several mines have been worked all the time, except at short intervals.

BULLION.—The Bullion mine has a shaft down 225 feet, 65 feet following the vein, with drifts 420 feet, and two cross-cuts, 60 and 150 feet. No. 4 level has 420 feet drift; No. 3 level 120 feet from the surface runs on the vein west 110 feet, easterly about 450 feet; No. 2 level 60 feet from the surface runs a drift 380 feet long; No. 1 starts at the top of the shaft and runs in 200 feet. The hill slopes 40 degrees. The winze which connects the third and fourth levels, 100 feet apart, is sunk 270 feet east of the main tunnel from third to fourth level, with shaft from surface to third level, 120 feet east of main shaft. No. 2 shaft is 70 feet down, connecting the third level with the surface. No. 3 shaft, 350 feet east of the main shaft, is 80 feet deep and connected with the third level. There are 1000 or more feet of shafts, winzes, and drifts at different points. The mine is provided with steam hoisting-works.

JAY GOULD.—Development-work is pushed vigorously. The ore is galena, gray copper, and wire silver.

MAYFLOWER.—This mine is opened by a tunnel, tapping the ledge 100 feet below the surface, and having two shafts connecting it with the surface. These shafts are located 300 feet apart, and 300 feet from the mouth of the tunnel. It is also opened by a tunnel running from the north where the property is cut by a gulch. This tunnel is 100 feet from the outcrop. Another tunnel, now in 550 feet, is expected to cut the vein at a depth of 600 feet below the surface. The ore-bodies lie in chutes, three of which have been cut by the upper tunnel, the widest one being 190 feet. A level has been run from the discovery-shaft each way, along the vein, from which large quantities of ore have been extracted, and there is now in sight in the roof and floor of each level, indicating that the body is continuous for about 100 feet, an average of one foot in thickness of splendid ore. The ore is galena and gray copper, averaging about 160 ounces silver and 65 per cent lead. In the new shaft, a large body of ore has been in sight from the grass down for fifty feet, where a level has been run to the south forty feet in ore. Other openings have been made along the outcrop to a depth of thirty feet, all of which have disclosed ore in reasonable quantities. Over 1000 tons of ore were extracted from the mine in 1881, the average assay being 138 ounces silver and sixty-eight per cent lead. The shipments this year show a large increase over last. Thirty-five men are working on the mine.

SAWTOOTH DISTRICT.

COLUMBIA & BEAVER.—The secretary reports officially that this company has spent over $110,000 for surface improvements and development of the property. The superintendent writes, under date of July 17th, that the winze in tunnel No. 3 has been sunk 50 feet through high-grade ore. An assay of the ore from the bottom of the winze gave $2541.83 to the ore. It is conceded that this is the richest ore ever discovered in the district. The ore is simply permeated with native silver.

WOOD RIVER REGION.

THE PHILADELPHIA MINING AND SMELTING COMPANY.—This company, with works at Ketchum, has sent to Philadelphia 83 tons of bullion to be refined. It averages 275 ounces of silver and 2·107 ounces of gold for the 83 tons. On the 15th of August this company will have two smelters in operation.

THE LITTLEWOOD RIVER MINING AND SMELTING COMPANY.—This company is erecting two smelters, which will be in operation in ten days.

MEXICO.

Alexander R. Shepard, ex-Governor of Washington, is erecting a mill and reduction-works at Charcas, Chihuahua.

It is stated that an English company is negotiating for the purchase of the San Anastasio mine in Morelas.

MONTANA.

The Helena *Independent* says:

THE GREGORY CONSOLIDATED REDUCTION-WORKS.—These have already reached an output aggregating seven tons of argentiferous lead per day. The water-jacket is to be enlarged, and then another furnace will be added of equal capacity, when the product of the plant will be more than double its present daily output.

NEVADA.

BATTLE MOUNTAIN DISTRICT.

BETTY O'NEAL.—Owing to trouble about the water supply, the Highland Chief mill is not running. The company will now have to bring water from the mine to use in the mill, which is about half a mile from the mine. A large quantity of ore is out.

COLUMBUS DISTRICT.

NORTHERN BELLE.—The official letters say: The main drift, 5th shaft level, has been extended 8 feet during the week without developing any change in the character of the ground. We have added 11 feet to length of cross-cut No. 1, the face being in hard quartzite. The main drift of 3d has been advanced 11 feet, and we are now preparing to cross-cut to the north, to meet the winze we have been sinking from, intermediate between 2d and 3d; the winze shows about the same width and quality of ore as last week. No change in other shaft levels. There is no very material change in levels above the adit. On the 8th, owing to the timbering and other work, the drift has been pushed ahead only 7 feet, showing in face 2 feet of fine ore; total length on the ore-body, 71 feet. On the 9th, the stopes look very promising; the drift has been extended 13 feet, in very much the same formation as last reported. The winze from this level has been connected with the 10th. A few days ago, we started to follow the small streak of ore found in this winze at a distance of 30 feet below 9th. We are now in 18 or 19 feet, and it has opened to 2 feet in width, the ore being of excellent grade. The cross-cut No. 10 is now in a total distance of 35 feet. Every thing is running smoothly in and about the mine, and the daily output of ore has been about 66 tons.

THE COMSTOCK LODE.

By telegraph from San Francisco, the operations are reported, August 3d, as follows:

MEXICAN.—The ore in the bottom of winze No. 1 has turned east at a dip that will soon carry it all the way across the winze.

UNION CONSOLIDATED.—The south drift, 2600 level, is still cutting bunches of ore. Much quartz is still showing on the 2900 level.

TUSCARORA DISTRICT.

NAVAJO.—The mill has been running steadily and doing good work since the 24th inst. Yesterday's battery pulp averaged $201.29, working 94·4 per cent. During the past week, we have run on a different lot of ore each day, and testing the grade and character of the ore from all parts of the mine, excepting the first-class ore, which we will test by and by. The grade of ore, as proved by these tests, and the percentage to which to which it is worked, are very satisfactory. We shall make our first shipment of bullion on the 31st—5 bars, enfaced value about $10,000. Will increase the amounts of the weekly shipments until we have attained about the average of what can be produced regularly from ten stamps.

WHITE PINE.

MARTIN WHITE.—As we follow the northern ore-body to the westward into the mountains, it opens out splendidly; every foot gives more ore and richer; and as from the present direction it would take at least 600 feet to reach the surface, to say nothing of depth, should it continue at its present rate of improvement, by mathematical progression for the whole distance, by the time the surface is reached we shall have something of a mine. Other parts of the mine, without showing any particular change, are looking well as the work progresses.

NEW MEXICO.

The latest telegraphic dispatches to the *Tribune* state the following:

The reported closing of the Kilby mine and the Magdalena smelter is false. Both are running full force and have plenty of ore aboard.

LADY HOPKINS.—A heavy strike of tellurium has been made at a depth of 150 feet.

MEMPHIS.—A double shaft is sinking. The ore is increasing in value; 1000 tons are on the dump; and 5000 tons are said to be in sight in the mine.

VALERIE SMELTER.—Three thousand pounds of copper are turned out every eighteen hours.

NORTH CAROLINA.

GOLD HILL.—The Carolina *Watchman*, of Salisbury, says: About a year ago, Mr. William Treloar was put in charge of the Gold Hill property by the English syndicate which purchased the mines. Since taking charge of the works, a new mill-house, 84 by 54 and 44 feet high, has been built, an amalgamation-house, 40 by 40 and 34 feet high; and over one quarter mile of tram-road, so built as to command any part of the mine, and arranged so as to require no elevation or second handling of ores. They have laid about one mile of piping to convey water from Bernhardt shaft to the mill-house, and from Flint shaft to supply fresh water to boiler. They have also built a large reservoir 100 by 60 feet, to hold water-supply. They have cleared the Bernhardt shaft of water—260 feet down—and are hoisting ores from stopes. They have sunk the new shaft reservoir (so called because the lode was struck when excavating the foundation for the reservoir) 60 feet, and have cut about 200 feet of driving and levels, and are now stoping the backs on the lode—60 cubic feet of which is done. This lode, when struck, was small, but has been steadily improving as they sank. It is sulphurets imbedded in talcose and chlorite slate, which for several feet on each side of the vein are auriferous; sets of hands are kept in this shaft night and day sinking and stoping. The Miller shaft is also new—down 60 feet, and connects with a whim-shaft 150 feet distant. This is a promising lode, which shows indications of opening finely—brown ore in slate bindings. The mill-house is supplied with a 20-stamp battery (arranged to accommodate as many more) and a Blake crusher. These are run by a 100 horse-power engine. There are engines, boilers, and pumps at the Bernhardt and Flint shafts, horse whims at the other shafts. The stamps fall about 30 strokes per minute, and the pulp passes through the finest mesh screen. Instead of the usual copper-plates, they use about 24 feet of blanketing, made for the purpose; each stamp-head having its own line of blankets, there is no quicksilver used in mortars, but these blankets are taken up and washed frequently; that, however, depending on the grade of ore being milled—blankets next to the head being cleaned twice as often as those at extremity of line. These blankets are washed in large tanks, which are covered by a wooden grating, sufficiently open to allow the free passage of the concentrates to the floor of the tanks. From these tanks the concentrates are carried to the amalgamation-house (adjoining the mill-house) and placed in one of four large revolving barrels. These are charged with 60 pounds of quicksilver each, together with 12 cubic feet of concentrates. These barrels are allowed to revolve 36 hours, and are then dumped into hoppers just beneath, from which the sands are slowly washed by a small stream of water into the "saxe." This saxe is 17 feet long, and is divided into three compartments; the first being charged with a large body of quicksilver, and containing agitators fastened to blocks which force the sands through the quicksilver into next compartment. This next division is just like the first, except that it is not charged—the sands passing through allow any quicksilver which may have escaped from the first section to settle in the basin of the second; and so the third division catches what may have escaped from the second. These sands in passing out of the saxe must again flow over 20 or more feet of blanketing, so that any floured amalgam which may have escaped the saxe is there caught and saved. They clean up about every ten days—and show an average of from $7 to $47 per ton, according to the quality of ore run through the mill. The milling capacity is 40 tons each 24 hours—and they are working a force of 70 hands. Superintendent Treloar says that he expects to open the 950-foot shaft this summer. It is now full of water, and will probably require several months to clear it; but it must be done, as this shaft contains the large 10-foot lode.

OREGON.

NICKEL ORE.—It is announced that a deposit of a hydrated silicate of nickel and magnesia has been discovered on Piney Mountain, Cow Creek, Douglas County. The mineral is amorphous, has an apple-green color; two varieties analyzed afforded 24 and 30 per cent of nickel oxide respectively, and 48 and 40 per cent of silica. In mineralogical character and in mode of occurrence, the nickel silicate is closely related to the garnierite (and noumeite) of New Caledonia.

Dr. Hood has given the following analyses of the Oregon and New Caledonia nickel ores:

	Oregon Ore A.	Oregon Ore B.	Garnierite.	Noumeite.
Silica	48·21	40·35	47·23	47·90
Iron and alumina oxide	1·38	1·33	1·66	3·00
Nickel oxide	23·88	29·66	24·01	24·00
Magnesia	19·90	21·70	21·66	12·51
Water	6·63	7·00	5·26	12·73

MINERAL PATENTS GRANTED BY THE GENERAL LAND-OFFICE.

ARIZONA.

TUCSON DISTRICT.

Blue Bird Mill and Mining Company, Blue Bird lode.

CALIFORNIA.

THE BODIE DISTRICT.

M. Friedlander, Jeff Davis quartz mine, Bull Run quartz mine, Beauregard quartz mine, James Morden quartz mine, Frank quartz mine, Lady Belle quartz mine, Urbanna quartz mine.

SACRAMENTO DISTRICT.

Old Hickory Gold Mining Company, Old Hickory quartz mine, Patterson quartz mine. Maria Wood *et al.*, Woodville placer. William Davey, United quartz mine. Giuseppe Grillo *et al.*, placer. George B. Chadwick *et al.*, Bear River Tunnel placer. Sucker Flat Mining Company, placer.

STOCKTON DISTRICT.

Cephas G. Kelley *et al.*, Kelley gold quartz mine.

COLORADO.

CENTRAL CITY DISTRICT.

Marcus W. Rasbach, Yankee Blade lode. Leabanan Mining Company of New York, Denver lode, Dixie lode, Syracuse lode and mill-site. Park Disbrow Alley May lode, Patsy lode, Park lode. G. F. Wentworth, Stanley lode'

Benjamin F. Smith, Smith lode. Steele Gold and Silver Mining Company, Rainbow lode. Abram M. Noxon, Hudson lode and mill-site. Elias Goldman, Barker lode. William A. Doyle *et al.*, Mary Foster lode. Justus E. Dubois *et al.*, Falcon lode. John S. Gates *et al.*, Delaware Extension lode. Gilbert Wakefield *et al.*, Dubuque lode. Clarence Stephens, Little Warrior lode and mill-site.

LAKE CITY DISTRICT.

Paul D. Wallis, Emblem lode. John H. Haines *et al.*, Great Epoch lode, Climax lode. San Juan & Poughkeepsie Gulch Mining Company, Manhattan lode and mill-site. A. W. Burrows, Bill Young lode. James M. Sparling *et al.*, placer. E. H. Heard, coal. Albert J. Johnston, placer.

LEADVILLE DISTRICT.

Charles S. Hall *et al.*, George Milo lode. Consolidated Tiger Mining Company, Rosa lode. William F. Patrick *et al.*, Pacific lode. James M. Burrell, Iron Mask lode, Little Belle lode. David D. Belden *et al.*, Mexican Maid lode. John McCombe *et al.*, Castle View lode. Alexander Lindrall *et al.*, Little Galesburg lode. John A. Smith *et al.*, Ravenna lode. Thomas James *et al.*, Duffie lode. Harley B. Morse *et al.*, Walnut lode, Chestnut lode. John Langhoff, placer and coal. William Fullerton *et al.*, Gregory second lode.

PUEBLO DISTRICT.

Joseph L. Prentiss, placer. Bassick Mining Company, Lookout lode. John D. Cochran, Alley mine. James H. Kerr *et al.*, P. and O. lode.

IDAHO.

BOISE CITY DISTRICT.

Levi Allen *et al.*, White Monument copper mine.

MONTANA.

HELENA DISTRICT.

Jacob Ornstein *et al.*, Home lode. Lee Mantle, Mary Ann lode. Oliver J. Reimel *et al.*, Twilight lode. Alexander H. Beattie, placer.

NEVADA.

CARSON CITY DISTRICT.

East Mount Diablo Mining Company, first easterly extension Peru quartz lode and mill-site.

EUREKA DISTRICT.

Q. A. Stephenson, Green Seal lode. John B. Williamson *et al.*, Big Giant lode. L. F. Dibber *et al.*, Western Globe lode.

NEW MEXICO.

LA MESILLA DISTRICT.

Massachusetts & New Mexico Mining Company, Legal Tender lode.

UTAH.

SALT LAKE CITY DISTRICT.

A. D. Bevan *et al.*, Stewart No. 2 lode. Hugh Campbell, North Star lode. Ophir Hill Mining Company, of Utah, Bannock lode. William Nelson *et al.*, South West Bonanza lode. Northern Chief Mining Company, of New York City and State, Chubb lode. Martin Correll, Saw-Mill lode. Northern Chief Mining Company, of New York City and State, Boston lode, Fisher lode. Liberty E. Holden *et al.*, Railroad lode.

WASHINGTON.

OLYMPIA DISTRICT.

Samuel Coulter, placer.

WYOMING.

EVANSTON DISTRICT.

Jesse Bell, placer. Job A. Edson, placer. William F. Bechel, placer. Edgar M. Morsman, placer. John Bell, placer.

CASES DISMISSED.—The appeal from the decision of the local land officers at Sacramento, California, accepting the protest of Jean Batist against the application of W. A. Neville *et al.*, for the Neville placer.

The protest of E. D. Sandare against M. E. No. 1020, Leadville, Colorado, being the claim of B. T. Belier upon the Badger lode, and a hearing ordered to determine the question of fact raised by the protest of W. F. Gleason and George Klippel against the same entry.

The appeals of Messrs. Lowe, Kerr & Fowler from the action of the register and receiver at Evanston, Wyoming, in allowing Mr. Carleton to make final proof.

HEARINGS ORDERED.—James Smith filed a protest against the Wahsatch lode, Utah, Samuel Hoyt, claimant. The protest was dismissed by the local officers, and on an appeal, a hearing is order to determine: 1st. Was it owing to the tortious action of his co-claimant that Smith did not do his share of the amount of work for 1878 and 1879? and 2d. Did Smith, on or about the last day of January, 1879, offer and tender to Hoyt his proportion for which he was in arrears?

Albert Reed protests against the claim of Henry Downing upon the Evening Star placer, entered at Marysville, California, alleging that he has performed no labor, etc. Applicant claims that all the points of protest were decided in his favor by the court when Reed sought his rights there; but in view of the allegations having been made with considerable explicitness, the commission has ordered a hearing.

In the case of J. De Courcy and John Connor upon the Argent and No-U-Don't lodes *vs.* G. Johnson upon the Wade Hampton lode, Utah, a hearing has been ordered to determine the following questions raised by protestants: 1st. Was the location of the Wade Hampton claim duly marked and staked upon the ground at the date of its alleged location? 2d. If so, did it embrace any part of the Argent or other claims? 3d. If it did so, was such part open to selection, and if so, on what grounds? 4th. Did the survey for patent cover and conform to the location as originally marked upon the ground, if it was so marked? 5th. Has $500 worth of labor or improvements been placed upon the claim by the claimant or his grantees? 6th. Have the locators or their grantees ever made any discovery of mineral upon the claim? 7th. Is the discovery-shaft situated within any other valid subsisting claim?

F. W. Becker *et al.* having entered a protest against the application of L. K. Thurber for patent to the Andora placer claim, Lake County, Colo., a hearing has been ordered to determine whether the existence of any veins or lodes was known at the date of the Andora application, in order that, if so known, such veins or lodes may be properly marked upon the plot of survey.

A hearing has been ordered in the case of William Edgar Bird, applicant for placer claim, Deadwood, Dakota.

SURVEYS ORDERED CORRECTED.—Dutchess lode, lot No. 45, C. A. Spring in conflict with patented Cabeza lode, lot No. 41; L. J. G. Jaeger, Pima County, Arizona.

Lady Adele lode, James M. Goff in conflict with McDermott placer, California Mining District, Lake County, Colo.

Kelly Quartz mine, C. G. Kelley, Jacksonville Mining District, Cal. Lines to be corrected.

Placer claim of S. T. Keim *et al.*, Messoula County, Montana, to be amended.

Pine Creek lode, John A. Hughes, Jr., and G. A. Black, Blue Ledge Mining District, Utah, conflict with patented Hawkeye lode.

Donovan lode, F. D. Waugh, California Mining District, Lake County, Colo., to be amended.

Emma lode, P. Boennemann, Jr., San Juan, Colo., to be corrected.

In the case of the Richmond Mining Company, of Nevada, *vs.* the Northwestern Consolidated Mining Company, the plot and field-notes are returned to U. S. Surveyor-General of Nevada, so as to be made to conform to the recent decision in the Sixth Judicial District Court of Nevada.

The claim of the National Mining and Exploring Company upon the Little Muddy lode and mill-site, entered at Helena, Montana, so as to conform to decision of court.

Graham & Cecil placer, San Gabriel District, Cal., H. C. Roberts.

Ferguson placer, W. Ferguson, San Gabriel District, Cal.

New Issue lode, Silver Flat District, New Mexico, Plymouth Rock Mining Company.

Winchester lode, Eureka District, San Juan, Colo., Hugh Ross. Apparently the same as Black Heath lode.

Home lode, Summit Valley District, Montana, Jacob Ernstine and James Doran.

The protest of George O. Munson, owner of two lots in the town-site of Silver Cliff, Colorado, against the mineral claim of Mary S. Davidson *et al.* upon the Western lode, has been dismissed. A patent will be issued for the latter without unnecessary delay.

Castle View lode, California Mining District, Colo., J. McCombs *et al.* Duff Gordon placer, including Duff Gordon, Florence, and E. R. Y. lode, Leadville, Colo. Colorado No. 2, Leadville, Colo., Meyer B. Haas *et al.* The entry of the Best & Belcher mines, Eureka, Nevada, was held for cancellation by reason of the absence of proof showing that the location, the side-lines of which were contiguous, was upon but one lode. Such proof having been furnished, the order for cancellation has been revoked, and the claim will be approved for patent as soon as some minor details have been corrected in the survey.

DECISIONS FINAL.—The decision of the register and receiver at Carson City, Nevada, in dismissing the protest of the Sutro Tunnel Company *vs.* the Delaware Mining Company, applicants for the Delaware mine, M. E., No. 235, is declared final by reason of the failure of the Tunnel Company to appeal from said decision within the time allowed by the rules of practice.

CLAIMS CANCELED.—Of Frank Vanocker and Richard Blackstone, so far as it is in conflict with the entry of the town-site of Deadwood, Dakota.

The claim of the Mike & Starr Gold and Silver Mining Company, upon the Goodell lode, entered at the Leadville office, Colorado, is canceled by Acting Commissioner C. W. Holcomb, because it lies within the limits of the Moyer placer, patented to William Moyer, January 30th, 1880; and as there is no possible way under the statute or the regulations of the General Land-Office that the same mineral land can be entered and patented twice and to different persons, the acting commissioner is at a loss to know how the local officers in the exercise of the duties of their office could find any warrant for such an entry.

The claim of the same company upon the Gardiner lode is canceled for the same reason; that is, it is within the limits of the Moyer placer, already patented.

APPROVED FOR PATENT.—New York lode, Tucson, A. T. Southern, Good Hope, Gold Cup, Relocation, Baltimore placers, Marysville, Cal., Cleveland, Sierra Hydraulic Mining Company. Eclipse Extension lode, Utah, W. H. Scott and W. Ottenheimer. Red Hot lode, Central City, Colo. Jones and Oregon Gulch lodes, R. S. Goff and Walter H. Jones.

PATENTS GRANTED BY THE UNITED STATES PATENT-OFFICE.

GRANTED JULY 4TH, 1882.

260,388. Casting Apparatus. William Hainsworth, Pittsburg, Pa.
260,389. Apparatus for Amalgamating Gold and Silver Ores. Walter Hamilton, New York.
260,390. Apparatus for Amalgamating Gold and Silver Ores. Walter Hamilton, New York.
260,410. Miner's Squib. John R. Powell, Plymouth, Pa.
260,414. Manner of Setting Retorts for Treating Sulphuric Acid. Albert Rappold and Ernest Leith, Titusville, Pa.
260,429. Crucible Furnace and Brick for Constructing the Same. Henry Swindell, Allegheny, Pa.
260,433. Variable Exhaust of Steam-Engines. Henry Watkeys, Syracuse, N. Y.
260,453. Centrifugal Ore-Concentrator. Alexander D. Clarke, Omaha, Neb.
260,483. Excavating Earth for Sinking Tubing. Charles H. Leach and Alpheus P. Sharp, Baltimore, Md.
260,502. Safety-Chamber for Submarine Tunnels. Henry F. Rudloff, New York.
260,517. Apparatus for Tempering and Flattening Sheet-Metal Plates. Emanuel Andrews, Williamsport, Pa.
260,527. Cam-Shaft Box for Stamp-Mills. Henry Bolthoff, Central City, Assignor to himself and Charles F. Hendrie, Denver, Colo.
260,539. Furnace for Deoxidizing Iron Ores. Israel D. Condit, Jr., Millburn, N. J.
260,682. Ore Amalgamator. Benjamin Hershey, Erie, Assignor of three fourths to Charles Hitchcock, Joseph A. Ege, and Benjamin Thornton, all of Bradford, Pa.
260,701. Machine for Straightening Metallic Straps on Bands. Lewis Miller, Philadelphia, Pa., Assignor to the Verree Iron Company, same place.

GRANTED JULY 11TH, 1882.

260,752. Machine for Coiling Wire. Hiram S. Hall, Jamestown, N. Y.
260,773. Blow-Pipe. Thomas T. Morrell, Johnstown, Pa.
260,786. Explosive Powder. William R. Quinan, San Francisco, Cal.
260,796. Ore-Crusher. Lewis C. Springer, Wilmington, Del., Assignor of one half to V. C. Walker and R. T. Elliott, both of same place.
261,022. Machine for Making Bolts and Rivets. James Morgan, Pittsburg, Pa.
261,057. Regenerator for Metallurgic and other Furnaces. Martin V. Smith, McKeesport, Pa.

GRANTED JULY 18TH, 1882.

261,122. Steam Boiler. George H. Babcock, Plainfield, N. J., and Stephen Wilcox and Nathaniel W. Pratt, Brooklyn, N. Y., Assignors to the Babcock & Wilcox Company, New York.
261,177. Ore-Concentrator. Charles D. Smith and William A. Sanders, Amador City, and George E. Woodbury, San Francisco, Cal.
261,296. Elevated Rope-Carrying System or Endless Railroad. Ambrose J. B. Berger, Easton, Pa.
261,297. Mortar for Stamp-Mills. Henry Bolthoff, Central City, Assignor to himself and Charles F. Hendrie, Denver, Colo.
261,337. Feeding Device for Grinding-Mills. William D. Gray, Milwaukee, Wis., Assignor to Edward P. Allis, same place.
261,339. Fan-Blower. Edward F. Schneider, Racine, Wis.
261,466. Ventilator for Mining-Shafts. Charles S. Litzenberg, Indianola, Iowa.

GRANTED JULY 25TH, 1882.

261,529. Means and Apparatus for Producing Intense White Light. Charles Clamond, Paris, France. Patent in England, March 24th, 1880; in France, May 20th, 1880; in Belgium, May 28th, 1880; in Germany, May 5th, 1881; in Italy, June 23d, 1881; in Austria; August 29th, 1881; and in Spain, September 5th, 1881.
261,560. Hydraulic Air-Compressor. Carl A. Mayrhofer, Paris, France. Patented in France, June 18th, 1881; in Belgium, June 25th, 1881; in Germany, October 4th, 1881; in England, October 10th, 1881; and in Austria-Hungary, October 29th, 1881.
261,605. Air-Compressor Apparatus. Ebenezer Hill, South Norwalk, Conn.
261,606. Compound Air-Compressor. Ebenezer Hill, South Norwalk, Conn.
261,607. Reservoir for Storing and Supplying Compressed Air. Ebenezer Hill, South Norwalk, Conn.
261,608. Mining Machine. Ebenezer Hill, South Norwalk, Conn.
261,622. Double-Acting Submerged Force-Pump. M. Frank McNelly, Sterling, Ill., Assignor of one half to William A. McCune, same place.
261,700. Direct-Acting Steam-Pump. John Gates, Portland, Oregon.
261,769. Machinery for Carrying, Cutting, and Cambering Railroad Rails. William K. Seaman, Scranton, Pa.
261,821. Chain. Francis M. Lechner, Columbus, O., Assignor to the Lechner Mining Machine Company, same place.

FINANCIAL.

Gold and Silver Stocks.

NEW YORK, Friday Evening, Aug. 11.

There is nothing of special interest in the mining market at the present time. Every thing continues very dull, and but little business is done outside of a few favorite stocks. Chrysolite has been one of the features of the week, at but little stronger prices than last week. Robinson Consolidated is, of course, another feature, and is extensively dealt in at very strong prices. The announcement was made at the New York Board to-day of the failure of Messrs. Foster & Draper, 58 Broadway. The sales of mining stocks at all the Exchanges for the week aggregate 464,990 shares, as against 448,167 last week.

The Leadville stocks were quiet and steady. Amie was strong at 18@21c., with sales of 27,700 shares. Chrysolite was active at stronger prices than at the close of last week; the sales aggregate 13,200 shares at $2.25@$2.40@$2.30. Hibernia was quiet and steady at 6@9@7c. Iron Silver was steady, selling at $2.05@$2.10. The sales of Leadville Consolidated amounted to 2200 shares at 70@72c. There was only one sale of Little Chief, and that at 52c. Little Pittsburg, with a small business, was a little weak, selling at $1.40@$1.25. Climax was about steady at 22@ 18c. Miner Boy sold at 4@3c.

The Bodie stocks were very quiet. Bodie, with a small business, was very irregular, and sold at $5@ $6@$5¼. Standard has sold from $15@$14 this week, with a business of 1500 shares. Bulwer was steady at $1.75@$1.90. Bechtel sold at 17c., and Tioga at 15c.

The Comstock shares were quiet and generally weak. California was quiet and irregular, and sold at 21@19@20c. Consolidated Virginia has fallen off from 60@41c., selling at the latter figure to-day. It closed weak at 43c. Sierra Nevada has been about steady at $5⅛@$4⅞. Union Consolidated has been very irregular at about steady prices; it has sold at $7¼@$6½, with a business of 695 shares. Mexican was steady at $5¼@$5⅞. Ophir, with a fair business, was steady, selling at $2⅛@$2⅜@$2¼. Best & Belcher sold at $5⅝@$6, with a fair business. Sutro Tunnel was fairly active at steady prices; it sold at 41@38c. with a business of 18,400 shares.

The Tuscarora stocks had a fair business at strong prices. Tuscarora sold at 6@8c. Belle Isle was very quiet at 25c. Navajo, with a fair business, showed some strength, selling at $4¼@$4¾. North Belle Isle was steady at 20@23c. Independence sold at 80c.

In the miscellaneous list, the Green Mountain stocks were quite active this week at strong prices. Gold Stripe sold at 29@30c.; Green Mountain was steady at $2.20@$2.25; Rising Sun sold at 44@43c., and Cherokee was quite strong, selling at 22@32@31c. Robinson Consolidated continues to show considerable strength. It sold at its highest price for the week to-day, namely, $1.70, as against its lowest last Saturday, $1.35. It closed strong at $1.65. Bradshaw has been quiet at steady prices, selling at $29@26c. Central Arizona has been quiet and steady at 70@75c. Eastern Oregon has been active and steady at $1.50@$1.45. Lacrosse has been rather quiet this week at about steady prices, selling at 24@20@21c. Oriental & Miller has been active and steady at 24@25c. Quartz Creek has been very quiet at 48@42c. Silver Cliff has been quiet and steady, selling at 62@57@55c. South Pacific sold at 12@14@ 13c. State Line Nos. 1 and 4 were very quiet at 9@7c. State Line Nos. 2 and 3 were fairly active at 28@26c.

There are rumors afloat to the effect that there has been some irregularity in the payment of the purchase money to one of the original holders of the Sierra mines, and it is stated that the subject will be brought before the courts in a suit to be begun by the heirs of the deceased prospector. We understand that the person accused denies the truth of these statements. A full investigation by the courts can alone show how much of truth there is in the story, which, however, is the subject of much discussion and comment. The amount involved is small, and is interesting only as showing at what a low figure—

DIVIDEND-PAYING MINES.

NAME AND LOCA- OF COMPANY.	SHARES. No. in 1000's	SHARES. Par Value.	ASSESSMENTS. Levied to date in 1000's.	ASSESSMENTS. Date and amount per share of last.	DIVIDENDS. Total paid to date in 1000's.	DIVIDENDS. Date and amount per share.	HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Aug. 5. H.	Aug. 5. L.	Aug. 7. H.	Aug. 7. L.	Aug. 8. H.	Aug. 8. L.	Aug. 9. H.	Aug. 9. L.	Aug. 10. H.	Aug. 10. L.	Aug. 11. H.	Aug. 11. L.
Alice, Mon..	400	25	*	.....	400	De 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Amie Con., Co....	500	10	*	.....	305	My 80 10	.18	.....	.18	...	.18	.....	.19	.18	.21	.19	.21	.....
Atlantic, Mich....	40	25	.....	.....	140	Fe 82 2 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Argenta, Ne.....	100	100	175	Ju 82 15	40	Fe 80 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bar & Walker, Ut.	100	10	*	.....	60	No 80 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bassick, Co.....	100	100	*	.....	25	Fe 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belle Isle, Ne.....	100	100	65	My 82 10	360	De 79 25	.....	.....	.....	.....	.....	.....	.25	.....	.....	.....	.....	.....
Black Bear, Ca....	90	100	15	Se 79 50	865	Ap 82 30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Belcher, Ne.....	104	100	2510	Ap 82 25	15397	Ap 76 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bodie Cons., Ca...	100	100	125	De 81 50	1225	Au 82 25	5.98	5.00	5.25	5.13	.....	.....	6.00	.....	5.88	.....	5.25	.....
Bos'n & Mon. Mon.	200	10	..	.....	...	280 My 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Breece, Co.....	200	25	*	.....	...	2 Fe 80 1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bulwer, Ca.....	100	100	30	De 77 50	100	Au 82 10	1.80	1.75	1.85	1.75	1.80	.....	1.90	1.75	1.90	.....	1.90	.....
California, Ne....	540	100	422	Ju 82 10	31320	De 79 50	.....	.....	.....	.....	.20	.....	.21	.19	.21	.....	.20	.....
Cal. & Hecla, Mich.	100	25	..	.....	21850	Au 82 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Caribou Con., Co.	100	10	*	.....	50	Mr 80 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Carolina Q'n, N.C.	100	2	..	.....	4	Jy 82 02	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Castle Creek, Id..	100	1	..	.....	9	Au 82 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Catalpa, Co.....	300	10	*	.....	180	My 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chrysolite, Co....	200	50	*	.....	1000	De 81 50	2.30	2.25	2.40	2.25	2.40	2.25	2.25	2.30	2.30	2.25	2.30	.....
Climax, Co.....	200	10	*	.....	180	Au 80 30	.22	.....	.21	.....	.....	.....	.20	.....	.20	.19	.18	.....
Cons. G. Mg., Ga.	100	5	*	.....	60	Jy 82 04	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cons. Va., Ne.....	540	100	807	Au 82 50	42930	Au 80 50	.....	.....	.59	.56	.60	.58	.59	.....	.61	.58	.45	.41
Copper Queen, Ar.	250	10	*	.....	375	Jy 82 40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Crown Point, Ne.	100	100	2673	Fe 82 25	11588	Ja 75 2 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
D'dw'd-Terra, Dk	200	25	*	.....	...	+775 Au 82 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dunkin, Co.....	200	25	*	.....	...	200 Ju 81 7½	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Eureka Cons., Ne.	50	100	100	My 76 1 00	‡	Jy 82 25	.....	.....	.....	.....	.....	.....	14¾	.....	18.00	15¾	15.50	14.00
Evening Star, Co.	50	10	*	.....	...	1175 Jy 82 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Excelsior, Ca....	100	100	300	Ja 82 1 00	875	Oc 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Fa. de Smet, Dk..	100	100	.....	.....	470	Au 82 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Findley, Ga.....	200	1	*	.....	8	My 79 1¢	.....	.....	.05	.....	.....	.....	.....	.....	.....	.....	.....	.....
Freeland, Co....	200	25	*	.....	50	My 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Glass-Pend., Co..	250	20	*	.....	25	My 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gold Stripe, Ca..	150	10	*	.....	76	Jy 81 15	.....	.....	.....	.....	.30	.....	.30	.29	.30	.....	.30	.....
Gld & Curry, Ne..	108	100	3422	My 82 50	3826	Oc 70 $10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Grand Prize, Ne..	100	100	370	Ju 82 20	450	Se 80 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Great Eastern, Dk	300	1	*	.....	16	Jy 80 01	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gr. Mountain, Ca.	125	10	*	.....	212	No 81 7½	2.25	2.20	2.20	.....	2.25	.....	2.25	2.20	2.25	.....	2.25	.....
Hale & Nor., Ne..	112	100	3950	My 82 50	1598	Ap 71 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hall-And's'n, N.S.	150	1	.....	.....	7	Ja 82 03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hecla Con., Mon.	30	50	.....	.....	342	Ap 82 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hibernia, Co....	300	25	*	.....	180	Jy 81 40	.06	.....	.07	.....	.....	.....	.09	.07	.09	.07	.07	.....
Homestake, Dk..	100	100	200	Ap 78 1 00	1512	Jy 82 40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horn-Silver, Ut..	400	25	*	.....	1400	Au 82 75	9.75	.....	10.00	.....	9.00	.....	9.25	.....	9.38	.....	9.50	9.25
Hukill, Co.....	200	5	*	.....	210	De 78 10	.35	.....	.30	.....	.30	.....	.30	.....	.30	.....	.30	.....
Indep., Ne.....	100	100	185	Fe 82 15	225	Se 79 25	.....	.....	.....	.....	.60	.....	.80	.....	.80	.....	.....	.....
In. Queen, Ne....	125	2	12	No 79 10	350	Jy 82 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Inyo, Ca.....	100	5	*	.....	45	Ap 82 05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Iron Silver, Co...	500	20	*	.....	700	Ju 82 20	2.05	.....	2.10	.....	.....	.....	.....	.....	2.10	.....	2.10	.....
Jocuistita, Mex..	100	100	.....	.....	550	Au 82 1 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
La Plata, Co.....	200	10	*	.....	550	Jy 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Leadville C., Co..	400	10	*	.....	210	Ju 82 05	.70	.....	.71	.70	.70	.....	.....	.....	.....	.....	.72	.....
Leeds, Ut.....	60	100	87	Ju 82 50	78	Oc 78 15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Little Chief, Co..	200	50	*	.....	700	Au 80 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.52	.....
Little Pitts., Co.	200	100	*	.....	1350	Mr 80 50	.....	.....	.....	.....	1.40	1.35	.....	.....	.....	.....	.....	.....
Martin White, Ne	100	100	925	My 82 25	90	Jy 79 30	.....	.....	4.65	.....	.....	.....	4.55	.....	.....	.....	.....	.....
Moose, Co.....	200	10	4	.....	550	Mr 78 25	.....	.....	.....	.....	.....	.....	.12	.....	.....	.....	.....	.....
Morning Star, Co.	100	10	.....	.....	490	Jy 82 25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Navajo, Ne.....	100	100	235	Mr 82 20	25	Mr 81 25	.....	.....	.....	.....	.....	.....	4.25	.....	4.50	4.25	4.75	4.35
N. Y. & Colo., Col.	50	20	.....	.....	25	Jy 70 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
N'h'n Belle, Ne..	50	100	.....	.....	2225	Au 82 50	.....	.....	.....	.....	12.25	.....	12.38	.....	.....	.....	13.25	.....
N. Belle Isle, Ne..	100	100	40	Jy 82 15	30	Au 81 15	.....	.....	.....	.....	.03	.....	.22	.20	.23	.....	.23	.....
Ontario, Ut.....	150	100	.....	.....	4550	Au 82 50	38.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	38.75	.....
Ophir, Ne.....	100	100	3306	Jy 82 1 00	1595	Jy 82 1 00	2.13	.....	2.38	.....	2.38	.....	2.38	2.25	.....	.....	2.25	.....
Osceola, Mich....	50	25	.....	.....	710	Jy 82 1 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plumas, Ca.....	100	10	*	.....	151	Jy 79 8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Quicks. Prof., Ca.	43	100	.....	.....	654	Ju 82 6 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
" Com., Ca.	57	100	.....	.....	151	Ju 82 40	.....	.....	.....	.....	.....	.....	.....	.....	10.00	.....	.....	.....
Quincy, Mich....	40	25	.....	.....	3230	Au 82 5 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rising Sun, Ca...	150	5	*	.....	52	My 81 7½	.....	.....	.....	.....	.....	.....	.44	.43	.....	.....	.....	.....
Robinson C., Co..	200	50	*	.....	575	No 81 50	1.50	1.35	1.55	1.50	1.50	1.40	1.50	1.40	1.65	1.50	1.70	1.60
Robt. E. Lee, Co.	500	500	.....	.....	50	Jy 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Savage, Ne.....	112	100	5664	Ju 82 50	4460	Ju 69 3 00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Sierra Nev., Ne..	100	100	4950	My 82 1 00	102	Ja 71 1 00	.....	.....	5.13	.....	4.88	.....	5.00	.....	5.00	.....	4.88	.....
Silver King, Ar..	100	100	.....	.....	1025	Au 82 25	.....	.....	15.50	.....	15.38	.....	15.00	.....	15.38	15.25	.....	.....
Silver King, Co...	500	2	.....	.....	50	Au 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Socorro, N. Mex..	2.5	100	..	.....	4	Mr 82 ¾	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Spr'g Valley, Ca..	200	1	*	.....	50	Ja 81 25	3.25	3.09	.....	.....	.....	.....	.....	.....	3.00	.....	.....	.....
Standard, Ca.....	100	100	.....	.....	8990	Au 82 75	14¾	14.25	14.50	14.25	14.75	14.00	15.00	14.00	14¾	14.00	14.25	14.00
Starr-Grove, Ne..	200	10	*	.....	16	Ju 81 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Stormont, Ut.....	200	1	*	.....	155	No 81 05	.....	.....	.81	.....	.....	.....	.....	.....	.....	.....	.....	.....
St. Joseph, Mo....	100	10	*	.....	350	Ju 82 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tip Top, Ar.....	100	100	170	Mr 80 50	100	No 81 20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tombstone, Ar...	500	25	*	.....	1350	Ap 82 10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Vizina, Ar.....	200	25	.....	.....	140	Mr 82 10	.....	.....	.....	.....	1.20	1.15	1.15	.....	.....	.....	1.10	.....
Yellow Jacket ..	120	100	5358	Fe 82 1 00	2184	Au 71 2 50	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

* Non-assessable. † The Deadwood has previously paid $275,000 in eleven dividends, and the Terra $75,000. ‡ 4817-5

SALES.—Amie Consolidated, 28,700; Belle Isle, 50; Bodie Consolidated, 1210; Bulwer, 1850; California, 2500; Chrysolite, 13,200; Climax, 1000; Consolidated Virginia, 5160; Eureka Consolidated, 630; Findley, 200; Gold Stripe, 2400; Great Eastern, 1600; Green Mountain, 2600; Hibernia, 8200; Horn-Silver, 1765; Hukill, 2400; Independence, 800; Iron Silver, 2700; Leadville, 2200; Little Chief, 100; Little Pittsburg, 410; Martin White, 300; Moose, 100; Navajo, 2000; Northern Belle, 300; North Belle Isle, 3300; Ontario, 110; Ophir, 800; Quicksilver, common, 100; Rising Sun, 300; Robinson Consolidated, 59,650; Sierra Nevada, 620; Silver King, 600; Spring Valley, 500; Standard, 1500; Stormont, 300; Vizina Consolidated, 400. Dividend shares sold, 150,455.

$10,000, we believe—the present promoters obtained control of the property.

DIVIDENDS.

The Deadwood-Terra Mining Company, of Dakota, has declared its twenty-first monthly dividend of $30,000, payable on the 21st inst. Transfer-books close on the 15th.

The Idaho Mining Company, of California, has declared a dividend (156) of $7.50 per share.

The Jocuistita Mining Company, of Mexico, has declared a quarterly dividend of $1 per share, and an extra dividend of fifty cents per share, payable August 31st. Transfer-books close on August 26th.

The Northern Belle Mining Company, of Nevada, has declared a dividend of fifty cents per share, payable on the 15th inst.

The Ontario Silver Mining Company, of Utah, has declared its eighty-second dividend (for July) of $75,000, payable on the 15th inst. Transfer-books close on the 5th.

The Silver King Mining Company, of Arizona, has declared a dividend (No. 32) of twenty-five cents per share, payable in San Francisco August 15th.

MEETINGS.

Baldwin Mining and Milling Company, 115 Worth street. Annual meeting and election of trustees, September 5th, between three and four o'clock P.M.

REVIEW OF THE SAN FRANCISCO MARKET.

The San Francisco market has been quiet and steady. Telegraphic dispatches say that the stocks of Bodie, Eureka, and Northern Belle have been very scarce, and consequently they have been quite strong. It is stated that the 2600-foot level ore stopes in the Union Consolidated will soon connect with the 2700-foot level, and that the output will then be considerably increased; but, notwithstanding this report, the stock has been dull and a trifle weak, selling at $6½@$6⅜@$6¾. The stock of Mexican has been assessed a dollar per share. The prospects of the mine are stated to be favorable. The price of the stock is steady at $5¼@$5¾. The shares of the Com

stock mines are generally dull on the market, outside securities being in greater demand. Consolidated Virginia has levied an assessment of thirty cents per share.

SAN FRANCISCO MINING STOCK QUOTATIONS.

Daily Range of Prices for the Week.

NAME OF COMPANY.	CLOSING QUOTATIONS. Aug. 4.	Aug. 5.	Aug. 7.	Aug. 8.	Aug. 9.	Aug. 10.
Alpha	1⅛	1⅛	1			
Alta	7-16	7-16	9-16	⅛	7-16	⅛
Bechtel					1-16	
Belcher				13-32	7-16	
Best & Belcher	6	5⅞	5⅞	6	6¼	5⅞
Bodie	5¼	5¾	5⅞	5⅞	5⅞	5¼
Bullion	3-32				3-32	
Bulwer			2			
California	3-16		3-16	3-16	3-16	3-16
Chollar	15-16	15-16	15-16	1	1⅛	1
Con. Virginia	19-32	19-32	19-32	19-32	19-32	7-16
Crown Point		9-16		⅛	⅛	9-16
Eureka Con			14¼	14⅞	15¾	14⅝
Exchequer		3-16		3-16		
Gould & Curry	2⅞	2¾	2¾	2⅞	3	2¾
Grand Prize			11-32	13-32	13-32	11-32
Hale & Norcross	13-16	13-16	27-32	27-32	15-16	29-32
Manhattan						
Martin White	4⅞	4¾	4⅞		4	4¼
Mexican	5¾	5⅝	5½	5⅝	5⅝	5⅞
Mono	13-16	15-16	1	29-32	13-16	
Mount Diablo		4⅛	4			
Navajo	4¼	4¼	4⅝	4¼	4½	4½
Northern Belle	12¼	12⅛	12¼	12⅜	12¼	13
Noonday	29-32	15-16	31-32	29-32	13-16	13-16
Ophir	2⅜	2⅜	2⅜	2⅜	2¼	2¼
Oro		3-16	⅛	⅛		
Overman	⅛		⅛	5-16	5-16	⅛
Potosi	7-16	13-32	½	⅛	19-32	½
Savage	27-32	13-16	13-16	27-32	27-32	13-16
Scorpion		9-16	19-32	19-32	9-16	9-16
Sierra Nev	5	5	4⅞	4⅞	4⅞	4⅞
Silver King				13⅞		14¼
Tip Top				2		2
Union Con	6¾	6½	6¾	6⅞	6⅞	6¾
Wales Con						
Yellow Jacket	1⅛	1⅛	1	1⅛	1	1

Copper and Silver Stocks.

Reported by C. H. Smith, 15 Congress street, Boston, Stock Broker and Member of the Boston Mining and Stock Exchanges.

BOSTON, Aug. 10.

Generally, the tone of the market has been better, with higher prices and greater activity. With this improvement in the heated term, there is hope for the future; and, after a long season of extreme dullness, it is certainly reasonable to expect a renewed animation "all along the line." It may be delayed somewhat, until after we reach a little cooler season; but that the market is booked for a rise in due time, is one of the things which is almost certain. Lake Superior stocks have resisted the depression even better than some other securities, and they are remarkably well held for a future rise. Calumet & Hecla has advanced from $2 43@$248, and is fairly sustained on limited transactions. Allouez remains at $2 bid, without sales. Atlantic, nothing doing; nominally $15@$16. Central, which at one time sold up in the thirties, is now offered at $21 and no takers. Franklin advanced from $14½ @$15, but later offered at $14⅞. Huron has been unusually active at an advance from $3¼@$4, then off to $3½ and up to $3¾, closing at that bid. This movement in the stock is due to the better prospects of the mine, which is gradually approaching a paying point, and will eventually take a favorable position among its now more favored associates at the Lake. National, which advanced last week to $2½, has since receded to $2⅛; closes $2 bid, without animation. The stock is considered cheap at the price, however. Osceola, dull for a long time at $32 and under, has advanced to $32½, which was bid. It should, and probably will, go higher. Pewabic is dull, and has further declined from $11¼, July 28th, to $10⅞, and later offered at $10¼, with 10 bid. Phœnix has advanced from 50c@$1¾, with $1 paid up meantime. Quincy has again been the leading stock, advancing from $34@$33, with large transactions; at this point it weakened, from too great a readiness to realize, and slowly receded to $32; anywhere from $60@$70, however, the stock is a good purchase to hold for dividends.

In Silver stocks, Bonanza has been the weakest, declining further to $3½, but that is now bid. Harshaw is about "dead" again at $2. Indian Queen declined from $2¼@$1¾. The stock of this company is to be increased from 125,000 to 500,000 shares, in part for the purchase of a new property. Meantime, the dividends are likely to be reduced from 5 cents per share (monthly) to 2 cents. Silver Islet, very dull and neglected for weeks—months in fact—has taken a little start from $15@$17¼ on renewed statements of the probable discovery of a "bonanza"—perhaps "hoped for" discovery would come nearer the truth, as at present nothing has been found to base definite results upon. These reported discoveries have been so frequent within a year or two that the public are a little skeptical, and this is shown clearly in the small advance in the stocks, as a veritable bonanza should have made it "jump" five to ten points.

At the Boston Mining and Stock Exchanges, there has been a wave of renewed activity and vigorous movement, and we note a better buying demand than previously for many weeks. A few stocks lead at present, but each day sees another take position in the front line, and it is astonishing how quick the public catch at these movements and send in orders on a rising market. Milton has been very prominent, advancing steadily from 25@34c., which naturally brought out stock, and the "bears" catching at the opportunity, broke the price to 25c. again; only a single hundred was sold at this figure, and new buyers soon carried it back to 28c. It bids fair to be one of the lively stocks of the market. Massachusetts & New Mexico, so long dull and neglected at 19@20c., has taken new vigor, and rallied to 27c., with numerous buyers. Deer Isle declined, at first, from 61@54c., but quickly rallied to 70c, then off to 65c., and again up to 72c. The talk is that the stock will reach $1 before many moons. Empire is dull and quiet at 29@30c., but there are indications of renewed activity in this stock too.

3 P.M.—The market closed a little quiet this afternoon, but apparently only a temporary lull. Calumet offered at $248; Franklin, $14½ bid; Huron, strong at $3¾ bid; Osceola, $32½ bid; Pewabic, dull at $10 bid; Atlantic, offered at $16; Silver Islet, $15 bid. Sullivan, which advanced from $3@$3¾ early in the week, has receded to $3 asked, $2¾ bid.

NON-DIVIDEND PAYING MINES.

NAME AND LOCATION OF COMPANY.		NUMBER OF SHARES.	Par.	ASSESSMENTS. Total levied to date.	Date and amount of last.		HIGHEST AND LOWEST PRICES PER SHARE AT WHICH SALES WERE MADE. Aug. 5. H.	L.	Aug. 7. H.	L.	Aug. 8. H.	L.	Aug. 9. H.	L.	Aug. 10. H.	L.	Aug. 11. H.	L.
Advance							39c	37c	34c	33c	32c		33c	30c	32c	31c	32c	
Albion, s. L	Nev.	150,000	100	397,500	Jun. 82	25												
Allouez	Mich																	
Alpha	Nev.			420,000	Mar. 82	50												
Alta	Nev.	100,800	100	1,641,600	May 82	50												
Alta-Montana, G	Mon.	500 000	10	*			65c											
Am. Flag, s	Colo	125,000	10	300,000	Jun. 77	25	8c											
Barcelona, G	Nev	200,000	25	*					9c		9c		9c	8c	9c		5c	
Bear Creek	Cal.	360.000	1															
Beauce																		
Bechtel Con., G	Ca.	100,000	100	165,000	Dec. 81	25									17c			
Best & Belcher, G, S	Nev.	100,800	100	1,295,390	Jul. 82	50	6.00		6.00		5.88	5.75	6.00					
Big Pittsburg, S, L	Colo	200,000	100	*														
Black Jack, G	Cal.	100,000	2½															
Bonanza Chief	Mon	1,000,000	1	*							4c						3c	
Bondholder	Colo	200,000	2½															
Boston Con., G	Cal.	100,000	100	70,000	May 82	20												
Bradshaw, S	Ariz	225,000	10				29c	28c	29c	28c	29c		28c		26c		28c	26c
Buckeye	Colo	100,000	5	*					1c		2c		2c		2c		2c	1c
Bull-Domingo, S, L	Colo	200,000	50	*					5c									
Bullion, G, S	Nev.	100,000	100	3,617,000	May 82	25			4c	3c	3c		4c	3c	5c	4c	4c	
Bye and Bye	Ariz	100,000	10	*														
Calaveras, G	Cal.	500,000	1	*			6c		7c									
Clay'r'a W. & M. Co	Cal.																23c	
Cal., B. H., G	Dak.	100,000	100	465,000	Apl. 82	25						.35			63c		74c	
Carbonate Hill, S, L	Colo	400,000	10															
Catskill, S	Nev.	300,000	5															
Central Ariz'na, S	Ariz	100.000	100						75c	70c	75c		75c		75c		75c	70c
Chapparal	Cal.								6c		7c	6c	8c				6c	5c
Cherokee, G	Cal.	150,000	10				18c				25c	22c	32c	22c	32c	31c	31c	30c
Clarence	Can.																	
Colorado Cent'l, S	Colo	300,000	10															
Col'mb'a Con., G, S	Nev.	100,000	50															
Cons. Imp'ri'l, G, S	Nev.	500,000	100	1,425,000	Jan 82	10												
Con. Pacific, G	Cal.	60,000	100	126,000	Jan 82	20												
Crescent, S, L	Colo	3 0,000	1	*														
Crowell, G	N. C.	50 ,000	1	*			9c		10c	9c	10c		10c		10c		9c	
Dahlonega, G	Ga.	200,000	1	*														
Dardanelles, G	Cal	1 0,000	10															
Decatur							68c	65c	68c	66c	66c		66c		66c			
Dunderberg, S	Colo	150,000	10	*														
Durango, G	Dak.	500,000	1	*					12c		13c				13c		13c	10c
Eastern Oregon							1 50		1.50		1.50		1.50		1.50		1.50	1.45
Empire	Ut'h	100,000	100								1.40							
Enterprise	Colo								61c	62c	62c	61c						
Exchequer	Nev.	100,000	100	630,000	Jan. 82	25												
Globe Copper	Ariz.						21c	14c	16c		14c	11c	11c	10c	12c	9c	13c	12c
Gold Placer, G	Colo	200,000	25	*														
Goodshaw, G	Cal.	100,000	10	180,000	Jun. 82	10												
Granville, G	N. C.	300,000	1	*													3c	
Harshaw, S	Ariz	100,000	100															
Head Center, S	Ariz	100.000	10	160,000	May 82	20												
Hortense, S	Colo	200,000	10								28c	27c	25c	24c				
Index	Cal.																	
Julia, G, S	Nev.	110,000	100	1,391,000	Jan. 82	20												
Kossuth, G, S	Nev.	108,000	100	421,200	Aug. 77	15												
Lacrosse, G	Colo	100,000	10	*			24c		22c	20c	21c	20c	21c	20c			23c	21c
Leviathan, S	Nev	100,000	100	355,000	Mar. 81	25												
Lucerne, S	Colo	500,000	10	*														
Mariposa Pref., G	Cal.	50,000	100	1,687,500	Dec. 81													
" Com., G	Cal.	100,000	100	1,950,000	Feb. 82													
May Belle, G	Cal.	100,000	100	84,000	Dec. 81	20												
Mayflower, S	Colo	100,000	100	*														
Meadran, G, S	Nev.	100,800	100	1,945,000	Jun. 82	30	5.75		5.63		5.25		5.75		5.88		5.88	
Michoacan Synd	Mex.																	
Miner Boy, G, S, L	Colo	500,000	10	*			4c		4c	3c	3c				3c		3c	
Miller	Nev.	200,000	25															
Mono, G	Cal.	50,000	100	500,000	Jun. 82	20												
Moose Silver, S	Colo	300,000	10															
Nevada Syndi																		
North Standard, G	Cal.	100,000	100	20,000	Nov. 81	10												
N. Horn-Silv'r, S, L	Utah	400,000																
Noonday	Cal.	60,000	10	118,000	Dec. 81	25												
Old Dominion, C	Ariz	200,000	100	*														
Oriental	Nev.	200,000	10															
Ori'nt'l & Miller, S	Nev.	400,000	25				25c	24c	26c	25c	26c	25c	27c	24c	25c	24c	25c	
Overman, G, S	Nev.	115.200	25	3,604,700	May 82	25												
Potosi	Nev.	112,000	100	448,000	Apl. 82	50												
Quartz Creek			100				48c	45c	46c	44c	43c				43c	42c	43c	42c
Rappahannock, G	Va.	250,000		*					20c		19c		20c				20c	
Red Elephant, S	Colo	500,000	1	*														
Retort M. M. Co			10															
San Pedro, G, S, L	N. M	400,000																
Silver Cliff, S	Colo	200,000	25	*							62c	59c	57c	55c	57c			
Silver Islet	Can.		50	*														
Sonora Con	Mex.																	
South Bodie, G	Cal.	100.000		100,000	Mar. 82	15												
South Bulwer, G	Cal.	100,000	100	195,000	May 81	25												
South Hite	Cal.	100,000	100		May 82	10												
South Pacific	Cal.		5				12c		14c	13c	14c	13c	14c	13c	13c		13c	
State Line No. 1, S	Nev.	200,000	1															
" No. 2, S	Nev.	200,000	25															
" No. 3, S	Nev.	200,000	25															
" No. 4, S	Nev.	200,000	25															
" Nos. 1 & 4, S	Nev.		25						8c		9c	7c	8c		8c		7c	
" Nos. 2 & 3, S	Nev.						28c	27c	28c	27c	27c		27c		27c		27c	26c
Sutro Tunnel	Nev.	3,000,000		*			40c		40c		39c		40c	39c	41c	39c	39c	38c
Taylor-Plumas			10				18c		17c		17c		17c	16c	15c	14c	16c	15c
Tioga, G	Cal.	100,000		275,000	Jul. 82	10					15c							
Tuscarora, S	Nev.	100,000	100	110,000	Oct. 81	15	8c								7c	6c	8c	
Unadilla, S	Colo	500,000	100	*			9c											
Union Cons., G, S	Nev.	100,000	1	1,360,000	Mar. 82	81	7.25	6.50			6.88	6.50	7.13	6.88	7.00	6.50		
Utah	Nev.	20,000	100	1,320,000	Ju. 82	81												
Vandewater, S	Nev.	200,000	100	*											18c			
Washington, S	Ariz.	200,000	10										6c		6c	5c	5c	
Willshire, G	Cal.	50,000	5	*														

* Non-assessable.

SALES.—Advance M. & M., 13,000; Alta-Montana, 200; American Flag, 200; Barcelona, 5600; Bechtel Cons., 200; Best & Belcher, 1300; Bonanza Chief, 1000; Bradshaw, 9100; Buckeye, 8600; Bull-Domingo, 100; Bye & Bye, 7400; Calaveras, 2000; Calaveras W. & M. Co., 100; California B. H., 100; Carbonate Hill, 1200; Central Arizona, 1410; Chapparal, 57,900; Cherokee, 8200; Crowell, 6500; Decatur, 4100; Durango, 2200; Eastern Oregon, 10,600; Empire, 50; Enterprise, 1500; Globe Copper, 28,200; Granville, 1000; Hortense, 2500; Lacrosse, 6600; Mexican, 680; Miner Boy, 4500; Oriental & Miller, 16,200; Quartz Creek, 3700; Rappahannock, 3100; Silver Cliff, 4600; South Hite, 3100; South Pacific, 19,200; State Line. Nos. 1 and 4, 2900; Nos. 2 and 3, 37,800; Sutro Tunnel, 18,400; Taylor-Plumas, 14,200; Tioga, 100; Tuscarora, 1500; Unadilla, 100; Union Consolidated, 695; Vandewater, 1000; Washington, 1900. Non-dividend shares sold, 314,535. Total shares sold at all the Exchanges, 464,990.

BOSTON MINING STOCKS.

	Aug 3.		Aug. 4.		Aug. 5.		Aug. 7.		Aug. 8.		Aug. 9.		Sales.
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
Advance M. & M. Co.													
Allouez	2⅛	2.00	2.00				2.00		2.00				1,200
Amie Con			.16						.18				1,000
Arizona Queen													
Atlantic			15⅝		15¼						15½		125
Atlas Min. & Devel. Co.	1.27		1.27		1.25		1.26	1.25	1.25		1.25		1,300
Aztec													
Blue Hill													
Bodie Con													
Bonanza Devel.	3¾		3⅜						3⅝	37-16	3⅝		2,200
Boston & Ariz. Mil. Co.													
Bowman Silver													
Brunswick Antimony			11.00										55
Bulwer			1.95				1.80		1.80		1.81		400
California													
Calumet & Hecla			248.00		248.00						248.00		42
Carbonate Hill													
Carlisle, Colo													
Carolina Queen													
Catalpa													
Cedar Spring													
Central Arizona	.78		.75						.75				500
Chrysolite							2.25						50
Columbus Gold													
Con. Golden Devel.													
Copperopolis													
Copper Prince													
Contentment													
Con. Virginia													
Crescent							.20						100
Crowell													
Cumberland Con.													
"Cusi"									2¼				200
Dana													
Deer Isle	.67	.61	.60	.54	.60	.57	.70	.65			.65		5,250
Douglas											.50		500
Dunkin											.30		100
Durango													
El Gachi													
Empire	.28	.27					.28		.29	.27			1,850
Eureka													
Franklin	14⅛		14½		14⅞		14¾		15 00		15.00		460
Gila County													
Green Mountain													
Harshaw	2.00								2.00				100
Hibernia													
Homestake													
Horn-Silver													
Hukill													
Huron	3¼	3.00	3⅜		3¼		4.00	3⅜	3⅞	3½	3⅝		2,495
Independence											.60		200
Indian Queen													
Little Chief													
Little Pittsburg			1.30								1.35		200
Mammoth			.03										200
Mascot					1.00		1.00						300
Mass. & New Mexico	.19						.20		.21	.20	.25	.23	6,400
Milton	.26	.24	.26	.25	.28	.27	.30	.29	.32	.30	.34	.32	22,565
Napa													
National	2⅝				2½		2⅝		2⅛				600
Northern Belle			12¾										50
Ontario			36⅞		37.00								20
Osceola	.32						32.00						18
Penn-Breckenridge													
Pewabic					11.00	10⅞							500
Phœnix									1¾				75
Pine Tree					.35								1,000
Plymouth Gold	.32		.32				.32		.32				920
Quincy	58.00	57.00	61.50	59.00	63.00	62.00	66.00	65.00	66.00	63.00	63.00	62¾	1,549
Robinson Con	1.33		1.36		1.42½		1.50		1.52		1.47		600
San Pedro	.40								.40				400
Sierra Nevada					5.15								50
Silver Cliff													
Silver Islet			15.00		15.00		17½	17.00	17.00		16¾		225
Silver King													
Southern Belle													
South Pacific							.14						500
Standard											14½		25
Star													
State Lines Nos. 1 & 4													
State Line Nos. 2 & 3					.27		.28		.27		.26		2,000
Stewart													
Sullivan	3.00	2.50	3¾	3¼	3½		3¼	3.00					1,100
Sutro Tunnel							.40		.40				800
Sycamore													
Tremont Silver													
Vizina Con											1⅛		100

BULLION MARKET.

NEW YORK, Friday Evening, Aug. 11.

The market has been without any feature of note for the last fortnight, and continues quiet but steady, abroad and here, at the figures of the annexed table:

DATE.	London	N. Y.	DATE.	London	N. Y.
	Pence.	Cents.		Pence.	Cents.
Aug. 5	*	†	Aug. 9	51⅛	113¾
Aug. 7	"	†	Aug. 10	51⅛	113⅞
Aug. 8	51⅛	113¾	Aug. 11	51⅛	113⅞

* 51 15-16. † 113¾@113⅞.

Bullion Receipts at New York.—The bullion received from the mines at the various offices in this city during the week ended August 11th, as compiled from various sources, amounted to $218,000, as against $195,500 reported for the previous week. The receipts from January 1st, 1882, to date, are $9,065,059.51.

Foreign Bank Statements.—The governors of the Bank of England, at their weekly meeting, made no change in the minimum rate of discount, which remains 3 per cent. During the week, the bank lost £692,000 bullion, and the proportion of its reserve to its liabilities was reduced further from 36¾ to 36 5-16 per cent, against 43 3-16 per cent at the corresponding date last year. The weekly statement of the Bank of France shows a gain of 1,475,000 francs, gold, and a loss of 1,675,000 francs, silver. The Imperial Bank of Germany lost during the week bullion to the amount of 5,540,000 marks.

Exports and Imports of Gold and Silver at New York.

Exports.

Week ended August 5th	$1,589,025
Corresponding week last year	186,400
Since January 1st, 1882	42,160,263
Corresponding period last year	6,964,673

Imports.

Week ended August 5th	$133,095
Corresponding week last year	356,964
Since January 1st, 1882	2,228,882
Corresponding period last year	30,634,810

BULLION PRODUCTION FOR 1882.

We give below a statement showing the latest bullion shipments. These are officially obtained from the companies, where that is possible; and where official statements can not be procured, we take the latest shipments published in those papers nearest to the mines reported. The table gives the amount shipped for the week up to the date given, as well as the aggregate shipments to such date, from the first of January, 1882.

The shipments of silver bullion are valued at $1.29·29 per ounce troy; gold at the standard $20.67 per ounce troy. The actual value of the silver in the following table is therefore subject to a discount, depending on the market price of silver. If the price of silver be counted at $1.12 per ounce, which has for some months been about its average value, the following figures, where they relate to silver bullion, should be diminished by about 13½ per cent to arrive at actual value.

MINES	States.	For the week.	Month of July.	Year from Jan. 1st, 1882.
*Alice, G. S.	Mont.			$442,354
*Alta-Montana, G.	"		$36,753	231,139
Barbee & Walker, S.	Utah	$1,365	7,544	55,670
Betty O'Neal, S.	Nev.			34,893
*Black Bear, G.	Cal.			15,650
Bodie, G. S.	"	10,530	52,923	255,933
*Boston & Montana, G.	Mont.			122,039
*Caledonia, G.	Dak.			23,116
*Caribou, S.	Colo.			91,021
*Central Arizona, S.	Ariz.			114,416
*Christy S.	Utah.			133,606
*Chrysolite, S. L.	Colo.		8,767	264,139
Cons. Bobtail, G.	"			$3,477
*Contention, S.	Ariz.		148,017	950,346
Crismon-Mammoth, G.	Utah.		12,500	60,829
*Custer, G. S.	Idaho.		59,243	527,048
*Deadwood-Terra, G.	Dak.			328,851
*Derbec Blue Grav., G.	Cal.			89,227
*Eureka Con., G. S. L.	Nev.	19,710	99,099	605,585
Evening Star, S. L.	Colo.			642,520
Father de Smet, G.	Dak.		11,636	235,721
Girard, S.	Ariz.			90,964
Grand Central, S.	"			700,000
Head Center, S.	"		10,500	25,360
*Homestake, G.	Dak.			602,656
Horn-Silver, S. L.	Utah.	32,500	308,500	1,991,110
*Hope, S.	Mont.		25,652	138,762
Idaho, G.	Cal.		52,000	353,540
*Indian Queen, S.	Nev.			97,966
Inyo Cons., G.	Cal.			77,000
Ingersoll, S.	Ariz.			90,000
Iron Silver, S.	Colo.			541,328
*Jocuistita, S.	Mex.			‡466,819
*†Leeds, S.	Utah.			11,988
*Little Pittsburg, S. L.	Colo.			106,859
Manhattan, S.	Nev.			64,300
Morning Star, S. L.	Colo.			333,126
Mount Diablo, S.	Nev.			179,445
New York Hill, G.	Cal.			56,256
Noonday, G.	"	3,860	12,330	57,690
North Noonday, G.	"	2,413	8,213	56,545
Northern Belle, S.	Nev.	18,116	65,776	443,088
*‡Ontario, S. L.	Utah.		260,847	1,538,672
Ophir, G. S.	Nev.		2,318	24,377
Pascoe, S.	Utah.			4,575
*Pleasant Valley, G. S.	Cal.			8,267
Robert E. Lee, S.	Colo.			292,550
Savage, S.	Nev.			3,500
*Silver Bow, G. S.	Mont.			158,230
Silver King, S.	Ariz.		12,870	181,957
Spring Valley, G.	Cal.			92,000
Standard, G.	"	17,240	77,459	633,440
Star, S.	Nev.		7,630	36,722
Stormont, S.	Utah.	3,450	33,009	179,519
Syndicate, G.	Cal.			19,429
Tintic M. and M. Co.	Utah.			26,534
*Tip Top, S.	Ariz.			174,383
*Tombstone, G. S.	"			‡590,286
Union Con., S.	Nev.		31,730	217,623
Vizina, S.	Ariz.			143,200
Total amount of shipments to date				$16,036,641

* Official. † Net. ‡ Assay value. *G. Gold. S. Silver. L. Lead.*

METALS.

NEW YORK, Friday Evening, Aug. 11.

Copper.—Reported sales continue limited. It seems possible to pick up small lots for 18⅛c., while rounder lots could not be got for less than 18¼c., Lake. The time is approaching when current contracts expire, and both parties will probably soon commence maneuvering. As the power of concluding these great transactions rests alone with the representative of the Calumet & Hecla, the other Lake Superior mines only being allowed to participate by special grace, the questions affecting the deliberations can not even be guessed at. Producers will naturally watch for the result with anxious interest, because it practically means the fixing of the price till the close of the year. Baltimore, Anchor, and other outside brands are held at 17¾c., though we suppose that dealers occasionally obtain round lots for lower figures. London recent cables are £68 for Chili Bars and £73 for Best Selected.

Tin.—A considerable business has been done in tin, aggregating probably 300 tons for the week, at 24¾ @25c. for cash, spot, and 23½c. for August and September delivery. At the last call at the New York Exchange, where tin and tin fixtures seem to be largely dealt in, Straits spot was quoted 24·95@25⅛c. bid and asked, 25@25⅛c. respectively for August, and 25 @25¼c. for September. Cables at the close at the Exchange make London £103 15s. to-day.

Lead.—As might be expected, our lead market drags along quietly, business being confined to a jobbing trade at nominally 5·10c. for Common, and 5·12½ @5·15c. for Refined. All the larger consumers of common lead being supplied, there is no one in the

market now of any influence, and there is no one who has a strong interest in depressing prices.

Spelter.—With little doing, and the general outlook of the metal remaining the same, prices are still nominally 5·35@5·40c. for Domestic and ordinary Foreign, and 5·50c for select Foreign. *Sheet-Zinc* quoted 7@7½c.

Antimony.—This metal remains quiet and steady at 11@11¼c. for Hallett's, and 13@13¼c. for Cookson's.

Quicksilver.—The San Francisco *Journal of Commerce* says:

The market has been very quiet during the past week. The price of quick-ilver has been 37@37¼c., the latter figure being the asking price.

IRON MARKET REVIEW.

NEW YORK, Friday Evening, Aug. 11.

American Pig.—Although business is limited, owing chiefly to the inability of producers of standard brands of foundry to supply any other than regular customers, the tone is firm and strong. For choice brands of No. 1 Foundry, $26@$26.75 is asked and obtained, while other brands fetch $25@$25.50. No. 2 is unchanged at $23@$23.50, and Forge at $21@$21.50. Bessemer pig is a little lower, $24.50 being asked, while Spiegeleisen is quoted $27@$27.50 for 10 per cent, and $35.50@$36 for 20 per cent.

Scotch Pig.—The market continues firm, although there has been a falling off in the inquiry, and business is duller. While spot prices remain full at our quotations, pig is offered for a little less to arrive. Abroad, the market is sustained, the latest cable figures for Warrants being 50s. 2d. A Glasgow dispatch to the New York Exchange, under date of the 9th, makes Eglinton 53s., and Glengarnock 55s. 6d., both at Ardrossan; and Gartsherrie, 63s. 6d.; Summerlee, 62s. 6d.; and Coltness, 66s., all f. o. b. Glasgow. Here we quote, spot: Coltness, $27@$27.50; Summerlee, $26; Glengarnock, $24.50@$24.75 Gartsherrie, $25.50@$26; and Eglinton, $23.50@$24, with sales of a few hundred tons at these prices.

Rails.—The steel rail trade has been for some time, and is still, in an unsatisfactory condition. On the one hand, the tariff agitation has had some effect upon buyers, notably in the South. That market would be practically delivered over to foreign producers should a reduction of the duty take place. Although most of the mills are supplied with orders for a month or two to come, the persistency of buyers in holding aloof for so long a time is beginning to tell seriously. The production is enormous, and has now reached a point where it exceeds the demand. Although having the advantage of a considerable item in the way of freights in their favor, Western mills are selling for as low a figure as Eastern mills are holding for, and the latter must soon follow. There is practically nothing doing in large contracts for future delivery, and what little business is doing is on the basis of $47@$47.50 for ordinary sections.

Old Rails.—An increased activity has been displayed, and under sale of D. Hs. aggregating about 2000 tons, and Ts footing up to 1500 tons, prices have advanced to $29½@$30 for the former, and $26.75@27.25 for the latter.

Scrap.—This has also become firmer, and is now quoted at $28.50@$29, ex ship.

Philadelphia. Aug. 11.

Late developments in iron and steel in the West create hopes of an earlier adjustment of difficulties than had been anticipated. The Amalgamated Association is weakening, and a meeting is to be held to-morrow to devise some method of escape from the dilemma in which it is placed. Non-union labor is increasing in supply, but at such slow pace that relief can not be relied on from that source alone. The sheet and bar manufacturers have met to agree upon recommendations to the Tariff Commission. The Eastern manufacturers will meet for the same purpose, 24th inst., at New York. The national convention of 12th prox. will be the largest ever held. Merchant Bar is easier, and demand is moderate. Inquiry is less active, but consumption is heavy. Card rates East are 2·6c.; nails, $3.40 card. Car-load lots are moving West. Foundry iron is in abundant supply, but makers decline concessions. Forge iron is strong at $22.50. Bessemer is dull at $24.50 spot; $23.50 late delivery; Angles, 3c.; Tees, 3 80c.; Beams, 4c.; Channels, 4·2c.; Tank, 3·40c.; Refined, 3·80c.; Sheet, 4c.; Flange, 5c. Mills are crowded with orders. Sheet is strong and active. Steel rails are dull at $48; Iron rails, $44.50; Steel blooms, $37; Tees, $26.50; Doubles, $28. Scrap is improving for better grades. Copper is quiet. Lead is steady.

Bessemer is offered at $23.50 for late fall delivery.

Muck Bars sold at $42.50.

Charcoal Blooms are quoted, for fall delivery, at $68.

Merchant Iron.—The business for the week has been limited to small orders at thirty days at 2·55c. Prices above and below this were exceptional. Consumers are acting cautiously on account of the possibility of non-union labor starting up mills or the union opposition giving way. Store orders are numerous. The fall trade is coming in slowly, and manufacturers are predicting a large volume of business. Sheet-iron is selling, in large lots, at 3@3½c., ground and sheared.

Nails—Could be sold at far higher prices than named at present, $3.40 card. Car-loads sell from interior mills at $3.30. Inquiry is very active.

Structural Iron—Is active in small lots, and firm at 3c. for Angles; 3·8c. for Tees; 4c. for Beam; and 4·2c. for Channels. A few large orders are in hand for October and November delivery.

Plate and Tank.—Tank orders are offered in excess of mill capacity. A few hundred tons were crowded in this week at 3·35c. Inquiry is strong, and several orders went West because local concerns could not deliver in September.

Sheet-Iron.—Quotations are very firm, and more iron is called for than can possibly be delivered.

Wrought Pipes.—Prices have been advanced within a few days to outside buyers. Demand is active.

Steel Rails.—Makers report small sales as of frequent occurrence at $49@$50; one good sized order was closed at $48 for late fall delivery.

Iron rails are dull.

Steel Blooms—Are quoted nominally at $36.50@$37; later delivery, lower; Spiegeleisen, $36.50; fall deliveries are offered less; but, in absence of transactions, definite prices can not be named.

Old Material.— Tees are fluctuating. A sale was made at $26.50; offers are made from $25.50.

Wrought Scrap is active on small lots of selected at $28@$30. The yards have been holding inferior stuff at prices which have kept buyers away.

PHILADELPHIA MINING STOCKS.

	Aug. 3.		Aug. 4.		Aug. 5.		Aug. 7.		Aug. 8.		Aug. 9.		Sales.
	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	H.	L.	
American Cons							.02						2,000
Argent			.19		.21		.19		.19				1,900
Arizona Southern													
Aztec													
Battle Mountain			.02				.02				.02		15,500
Black Sulphuret													
Buena	.10	.09	.10	.09	.09		.10						4,500
California													
Calista	.10	.09	.08		.09		.10	.09	.09				27,000
Cincinnati	.15	.14	.15										1,700
Compromise	.47½	.45	45		.45		.47½		.45	.42½	.40	.37½	11,900
Cons. Virginia													
Dauntless	.05		.05		.05				.05		.05		30,000
Del Monte			.18		.18		.20		.18				4,200
Denver City Con	.32½								.35	.30			3,400
Fairview Con	.02				.03	.01	.02				.02		16,100
Eureka Con													
Girard	.40		.40		.40		.40		.40	.37½	.40		12,000
Golconda													
Golden Age Group													
Governor Group	.20		.19						.19				1,600
Grand Union			.08		.09	.08	.08		.09		.09		43,600
Gunnison Imp. Co			.85										400
Hancock													
Hiberna													
Homestake													
Intervener													
Iowa Gulch	.18		.18		.18	.17	.17		.17		.16		19,200
King Bullion													
Ledger Con													
Little Diamond													
Little Maud							.05						2,500
Long & Derry Hill													
McCullough													
Magnolia	.09		.09		.09		.09		.09		.09		25,100
Montana													
Mount Lincoln													
Mount Sheridan													
National											.01		2,000
Orion	.15	.14											200
Pembina	.82½												500
Penn-Breckenridge	.35		.35		.37½						.37½		3,800
Permanent													
Pizarro													
Pizarro Extension	.06	.05			.05						.05		14,000
Rara Avis	1.45		1.45	1.40	1.40		1.42½	1.40	1.30	1.10			1,500
Rara Avis Extension	.13				.12				.12				2,100
Rico Pioneer													
San Pedro	.04												1,000
Silver Cord											.57½		100
Silver Plume			.03										4,000
Silver Rock													
Standard													
Sutro Tunnel													
Tombstone	1.10		1.07½				1.07½		1.12½	1.10	1.10	1.07½	3,800
Victor					.01						.01		2,000
Yale Mountain													

COAL TRADE REVIEW.

NEW YORK, Friday Evening, Aug. 11.

Anthracite.

The anthracite coal trade is dull, and the anxiety to move coal is causing prices to weaken, and they may now be said to be entirely independent of the circulars; more so than they have been at any time. In the face of this, there is talk of an advance in September. The June advance was made to move May coal; it was followed by a nominal increase in prices in the beginning of July to move June coal, and in both instances the following of this policy to a rapidly decreasing extent was successful. It did absolutely no good to attempt to start July coal by an advance at the beginning of this month, and yet there are men occupying the most influential positions in the coal trade who have a belief in the efficacy of such a worn-out stimulant. To talk seriously of an advance for September, when even the July figures are not generally realized (as it is rumored they are not), is preposterous. If ever the circulars of the companies had any meaning, their action during the last few months has thoroughly discredited their value. The coal business, like all others now, is in a state of quietude which no violent remedies will alter. It has, however, the best prospects for the near future, there being really no serious disturbing causes at work. By creating an impression among outsiders that the trade is in a condition warranting successive monthly advances, no good has been done, while it may result in serious evil, by driving labor to ask higher wages than the actual condition of the business will warrant. A large class of the miners struggled along on half-time, and found that it gave them enough to eat and to drink. They have no ambition of making more by actual work, and would just as lief stop for a while to get an advance as not.

As matters now stand, the present is gloomy enough, but the prospects for the future, we can not help believing, are good. That we have now reached the lowest actual point and that an upward move-

ment is likely to be inaugurated, seems to us reasonable, from a contemplation of all the points. We believe, therefore, that to close buyers who do not mind carrying coal awhile, no better opportunity for purchases will be offered than now. We take this view regardless of any threats of increasing the circular which some of the companies may indulge in.

The production of anthracite coal last week was 630,162 tons, as compared with 712,886 tons the previous week, and 546,177 tons the corresponding week of 1881. The total product from January 1st to July 29th, was 15,977,880 tons, as against 15,566,168 tons for the like period of last year, showing an increase this year of 411,712 tons.

Bituminous.

The Clearfield field is again at full work, and the only complaint that comes from the region is, that there is a slight scarcity of cars. In the Cumberland region, a representative of the men has published a letter inviting the companies to a conference. It is understood, however, that the latter are not inclined to treat in a body with delegations of the men, they preferring each to deal with their own miners.

Trade is by some reported consideraly better, while others seem anxious to dispose of their coal. Prices, therefore, are a little mixed as usual, and an average may be placed at $4.40@$4.50 alongside.

STATISTICS OF COAL PRODUCTION.

Comparative statement of the production of anthracite coal for the week ended August 5th, and years from January 1st:

TONS OF 2240 LBS.	1882.		1881.	
	Week.	Year.	Week.	Year.
Wyoming Region.				
D. & H. Canal Co..	80,530	1,934,829	60,569	2,015,406
D. L. & W. RR. Co.	110,637	2,523,947	91,881	2,041,215
Penna. Coal Co.....	37,712	758,379	31,532	741,799
L. V. RR. Co.....	15,560	616,673	26,186	661,887
P. & N. Y. RR. Co..	3,761	114,771	2,361	51,732
C. RR. of N. J	32,105	1,341,426	29,896	1,344,965
Penna. Canal Co....	12,888	243,606	10,488	224,769
	293,256	7,533,631	352,913	7,441,773
Lehigh Region.				
L. V. RR. Co.....	113,048	2,696,526	92,083	2,494,195
C. RR. of N. J.....	32,197	1,244,799	38,572	1,201,385
S. H. & W. B. RR..	581	40,370	.....	6,676
	145,826	3,981,695	130,655	3,702,256
Schuylkill Region.				
P. & R. RR. Co.....	159,661	3,734,305	143,317	3,793,423
Shamokin & Lykens Val.....	30,473	695,318	18,332	591,910
	190,134	4,429,623	161,649	4,385,333
Sullivan Region.				
St Line&Sul.RR.Co.	946	32,931	960	36,806
Total	630,162	15,977,880	546,177	15,566,158
Increase.....	83,985	411,712	.....	.....
Decrease	.....	.....	.....	.....

The above table does not include the amount of coal consumed and sold at the mines, which is about six per cent of the whole production.

Total same time in 1877.....11,673,809 tons.
" " " " 1878.....9,199,031 "
" " " " 1879.....14,843,245 "
" " " " 1880.....12,347,573 "

The decrease in shipments of Cumberland Coal over the Cumberland Branch and Cumberland & Pennsylvania railroads amounts to 704,905 tons, as compared with the corresponding period in 1881:

Belvidere-Delaware Railroad Report for the week ended August 5th:

	Week.	Year. 1882.	Year. 1881.
Coal for shipment at Coal Port (Trenton)	4,138	50,701	32,671
Coal for shipment at South Amboy	18,255	442,763	395,901
Coal for distribution..... ..	11,593	415,372	405,103
Coal for company's use	1,768	75,681	63,561

The Production of Bituminous Coal for the week ended August 5th was as follows:

Tons of 2000 lbs., unless otherwise designated.

	Week. Tons.	Year. Tons.
Cumberland Region, Md.		
Tons of 2240 lbs.....16,299		583,543
Barclay Region, Pa.		
Barclay RR., tons of 2240 lbs..	5,775	257,032
Broad Top Region, Pa.		
Huntingdon & Broad Top RR.	6,972	163,516
East Broad Top.....	1,882	54,495
Clearfield Region, Pa.		
Snow Shoe.....	5,509	131,654
Tyrone and Clearfield..... . . .	54,010	1,648,051
Alleghany Region, Pa.		
Pennsylvania RR.. 11,197		310,944
Pittsburg Region Pa.		
West Penn RR.....	5,258	206,815
Southwest Penn. RR..	5,371	54,086
Penn & Westmoreland gas-coal, Pa. RR..... ... .16,432		770,575
Pennsylvania RR..	8,079	408,972

The Transportation of Coke over the Pennsylvania Railroad for the week ended August 5th, and year from Jan. 1st:

Tons of 2000 lbs.	Week.	Year.
Penn. RR. (Alleghany Region).....	1,837	65,880
West Penn. RR..	1,378	70,942
Southwest Penn. RR 31,453		1,062,254
Penn. & Westmoreland Region, Pa. RR	3,696	152,444
Pittsburg, Penn. RR	6,320	368,681
Show Shoe (Clearfield Region)..... ..	303	13,865
Total. 44,987		1,734,066

FREIGHTS.

Coastwise Freights.

Per ton of 2240 lbs.

Representing the latest actual charters to Aug. 8th, 1882.

PORTS.	From Philadelphia.	From Baltimore.	From Elizabethport, Port Johnston, South Amboy, Hoboken, and Weehawken.
Alexandria.....	.85	.80	.....
Annapolis..... ...	.....	.....	.....
Albany.....	.....	1.75	.50@.55
Baltimore	.50	.....	.....
Bangor.....	.....	.....	.....
Bath, Me.....	1.35	.....	.....
Beverly	1.35@1.40	.....	1.20
Boston, Mass.....	1.35@1.40	1.30	.....
Bristol.....	1.25	.....	1.10@1.20
Bridgeport, Conn.	.....	1.25	1.00
Brooklyn	.85	.....	.55@.60
Cambridge, Mass.	1.40	.....	1.80@2.05
Cambridgeport ..	1.35	.....	1.15@1.20
Charleston, S. C..	.75	.....	1.15@1.20
Charlestown.....	1.35	.....	.....
Chelsea.....	1.35	.....	.....
City Point..... ..	.....	.....	1.20@1.25
Com. Pt., Mass....	.....	.....	.....
E. Boston..	1.35	.....	.....
East Cambridge	1.40	.....	1.10@1.20
E.Gr'nwich,R. I.	1.25	.....	1.15@1.20
Fall River.....	1.20@1.25	1.25	.....
Galveston.....	.....	.....	.90
Georgetown, D.C.	.85	.....	.....
Gloucester.....	1.40	.....	.....
Hartford..... ...	.....	2.00	.....
Hackensack.....	.....	.....	.....
Hudson..... ...	.....	.....	.....
Lynn	1.50	.....	.....
Marblehead.....	1.45	.....	1.30
Medford	.....	.....	1.20
Millville, N. J....	.....	.....	.....
Milton.....	.....	.....	.....
Newark, N. J.....	.....	.....	.....
New Bedford	1.25@1.20	1.30	.....
Newburyport	.....	1.75	.....
New Haven.....	.....	1.25	1.35
New London.....	.....	.....	.55@.60
Newbern.....	.....	.....	.75
Newport.....	1.25	.....	.....
New York.....	.85@.75§	1.25	.90
Norfolk, Va	.55@.60	.65	.....
Norwich..... ...	.....	1.40	.....
Norwalk, Conn ..	.....	.....	.80@.85
Pawtucket.....	.....	1.40	.....
Philadelphia.....	.....	.60	.....
Portland.....	1.20@1.30	1.30	.....
Portsmouth, Va..	.55@.60	.....	.....
Portsmouth, N.H.	1.40@1.45	1.25	1.25@1.30
Providence.....	1.20	1.25	.....
Quincy Point.....	.....	.....	.....
Richmond, Va...	.70@.75	.....	.....
Rockland, Me....	.....	.....	1.20
Rockport	.....	.....	1.40
Roxbury, Mass...	1.35*	.....	.....
Saco.....	1.35*¶	.....	.....
Sag Harbor.....	.....	.....	.85@.90
Salem, Mass.....	1.50	1.40	1.25@1.30
Saugus	.....	.....	.....
Savannah.....	.....	.....	.....
Somerset.	1.20	.....	1.00
Staten Island....	.....	.....	.....
Trenton.....	.....	.90	.....
Troy.....	1.00§	1.75	.....
Wareham.....	.....	1.30	.....
Washington.....	.85	.80	.....
Weymouth.....	.....	.....	.....
Williamsbg, N.Y.	.....	.....	.18‡ .20§
Wilmington, Del.	.....	.60	.....
Wilmington, N.C.	.....	.....	.....

* And discharging. † And discharging and towing. ‡3c. per bridge extra. § Alongside. ‖ And towing up and down. ¶ And towing. ** Below bridge. †† Towing and pilotage, $75. H Hoboken.

Wholesale Prices of Bituminous Coals.

Clearfield, at Philadelphia.....	.. .@....
" " South Amboy.....	$4.20@$4.35
" " New York, alongside.....	4.35@ 4.50
Block House..... ..	1.75 f. o. b.
International.....	1.75 f. o. b.
Freights to Cuba.....	....@$1.50

Wholesale Prices of Anthracite Coal Delivery, f. o. b., at Tide-Water Shipping Ports, per ton of 2240 lbs.

	Lump.	Steamer.	Grate.	Egg.	Stove.	Chestnut.
WYOMING COAL.	$	$	$	$	$	$
* Pittston at Newburg.....	3 95	3 95	4 05	4 05	4 25	4 25
Scranton at Hoboken.... .	3 90	3 90	3 90	3 90	4 00	3 90
Lackawanna at Weehawk'n	4 15	4 15	4 30	4 30	4 45	4 50
Wilkes-Barre at P. Johnston	4 30	4 30	4 30	4 30	4 45	4 35
Plymouth R. A. at P. John.	.....	.....	4 40	4 45	4 85	4 45
LEHIGH COAL.						
Honey Brook at Port John.	5 25	....	4 35	4 35	4 45	4 35
Cross Creek at Port John..	4 40	4 25	4 25	4 25	4 25	4 00
U.L. & Coun. Ri'ge at Eliz'pt	.....	....	4 25	4 25	4 25	4 00
SCHUYLKILL COAL. *At Elizabethport.*						
Hard White Ash..... ...	5 15	5 15	4 50	4 50	4 50	4 30
Free-Burning White Ash...	.....	4 30	4 30	4 30	4 50	4 30
Schuylkill Red Ash.....	.....	.....	... .	4 40	4 60	4 30
Shamokin.....	.....	.....	.....	4 50	4 70	4 30
Lorberry.....	.....	.....	.....	4 65	5 00	4 45
Lykens Valley (Brookside).	.....	.....	5 35	5 50	5 50	4 95
At Port Richmond, Philadelphia, for shipment to points beyond Capes of the Delaware.						
Hard White Ash.....	4 75	4 75	4 15	4 15	4 15	3 95
Free-Burning White Ash...	.....	3 95	3 95	3 95	4 00	3 95
Schuylkill Red Ash	.....	.....	... .	4 05	4 25	3 95
Shamokin.....	.....	.....	.....	4 15	4 35	3 95
Lorberry.....	.....	.....	.....	4 15	4 50	3 95
Lykens Valley (Brookside).	.....	... .	.....	5 00	5 00	4 45

* Fifty cents additional for delivery at New York.

Horsford's Acid Phosphate
As a Cooling Drink.

DR. M. H. HENRY, New York, says: "It possesses claims as a beverage beyond any thing I know of in the form of medicine, and in nervous diseases I know of no preparation to equal it."

OFFICE OF THE JOCUISTITA MINING COMPANY, No. 18 Wall Street, New York, Aug. 9th, 1882.

DIVIDEND NO. 5.

THE JOCUISTITA MINING COMPANY HAS this day declared a dividend of one hundred and fifty thousand dollars, being a quarterly dividend of ONE DOLLAR per share, and an extra dividend of FIFTY CENTS per share, payable at the office of Lounsbery & Haggin, No. 18 Wall st., on the 31st inst.

Transfer-books close on the 26th inst.

R. P. LOUNSBERY, President.

OFFICE ONTARIO SILVER MINING COMPANY, 18 Wall Street, New York, Aug. 5, 1882.

DIVIDEND No. 82.

THE REGULAR MONTHLY DIVIDEND of fifty cents per share has been declared for July, payable at the office of the transfer agents, Lounsbery & Haggin, 18 Wall street, on the 15th inst. Transfer-books close on the 10th inst.

LOUNSBERY & HAGGIN, Transfer-Agents.

WANTED.—A practical and skillful Mining Engineer and Geologist to take charge of Hematite mining in Virginia; a middle-aged, married man preferred. Address, with testimonials, Editor of ENGINEERING AND MINING JOURNAL.

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